THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

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For the Farmers' Cabinet.

Transmutation of Plants.

Mr. Editor:—It appears by a couple of communications in the 13th number of the second volume of the Farmers' Cabinet, that the obsolete doctrine of the *transmutation of plants* still finds believers, and advocates, among a portion of our respectable agriculturists. This antiquated notion was formerly very prevalent; nor is it surprising that it should have been so, when intelligent men were content to receive *specious appearances* for *unquestionable facts*, and had a ready faith for all the pretended wonders of Astrology and Alchymy. The present state of science, however, requires that all theories and seeming facts, which are inconsistent with the known laws and operations of nature, should be rigorously investigated before they are admitted; and hence we find that naturalists have been compelled to discard, as untenable, all such doctrines as *equivocal generation*, or *spontaneous production*, and the *transmutation of plants and metals*. Many errors of opinion have originated, no doubt, from our proneness to consider *successive phenomena* as connected with each other by the relations of cause and effect—when they have been entirely distinct—and their association altogether incidental. This I take to be the fact, in the supposed case of the transmutation of plants. When we see *one kind* of plant growing up, in places where we had every reason to expect *another kind*, it is perhaps natural enough—but certainly not very philosophical—to imagine that the *expected plant* has been *transmuted*, or changed, into the one which we find *actually growing*. The manner in which crops of different plants succeed each other, is very remarkable,—nor do we yet thoroughly comprehend the economy of Nature, in the distribution of seeds, and the wonderful preservation of their vitality; but it is unquestionably more consistent with all that we *do* know of the vegetable creation, to suppose that every plant, wherever found growing, has sprung from seeds of its *own kind*—than that its botanical characters have been utterly changed by the influence of external causes. We all know that seeds are extensively disseminated in the soil; and that the vitality of many kinds will remain dormant for long periods, under certain circumstances; but I have never met with any satisfactory evidence of the conversion of *one species* of plant into *another*—much less of the transmutation of *distinct genera*.* That different tribes of vegetables do *succeed* and *supersede* each other, in our fields and meadows, we every year see to be a fact. Our *wheat crops*, in this vicinity, are generally succeeded by a copious growth of *Bitter-weed*, and *Foxtail grass*,—which spring up after harvest, and are then in turn superseded by the cultivated and natural grasses, until the soil is again disturbed by the customary rotation of crops. *Pine forests*, when cut off, are apt to be succeeded by a growth of *oak*; and so of many other plants. I have often sown *Timothy and Orchard grass*, plentifully, in low grounds; and have had, instead of those plants, an abundant growth of *Rushes*, and *Cyperaceæ*: but I never for a moment suspected that my favorite grasses had been *transmuted* into those vile weeds. I have also had *Bromus*, or *cheat*, to grow up where I had sown *wheat*; and I have often seen *cheat*, and *other species* of the *same*

* The beautiful theory of the *metamorphosis of organs* (such as that of leaves into *Bracts*, *Sepals*, *Petals*, *Stamens*, and *Carpels*) is a very different doctrine from that of the *transmutation of species*, and is in no wise available in sustaining the latter notion.

genus, growing where no *wheat*, nor other cultivated grain, had been sown; but, upon the closest investigation, I have never been able to find the slightest evidence of any plant being *changed* into a different one. It seems that Mr. Featherstonehaugh is of opinion plants *can* be so changed. Whenever Mr. F. shall have demonstrated the correctness of the old contemporary doctrine, of the *transmutation of metals*, I shall be prepared to receive the doctrine of the *transmutation of plants:* but probably not till then. I aver that all *ascertained facts*, and all *analogy*, sustain the opinion that *species* are invariably continued, and preserved, by means of *seeds;* whilst the same facts, and analogy, repudiate the doctrine both of *transmutation* and *spontaneous production*. The vegetation of seeds is nothing more than a developement of the embryo, or miniature plant, which already existed in a quiescent state—but with a perfectly definite form and character—in those seeds. The operation of *external causes* (such as soil and climate—light, heat, moisture, nourishment, &c. either deficient or in excess) may, indeed, effect a modification in the *appearance* of a plant—in the size, aspect, texture, &c. of its various organs—so as to produce *varieties*, or *monstrosities;* but they can never change the *specific character*—nor *convert one species into another*—much less can they transmute *distinct genera* into each other; such as *Wheat* into *Bromus* or *Timothy* into *Orchard grass*. The idea is repugnant to all the known laws and operations of nature; and can no more be tolerated, by a philosophic mind, than the doctrines of Alchymy and perpetual motion.

It is a curious circumstance, in the history of this popular error, that one unlucky grass—one particular species of the numerous family of *Bromus*, (*namely, B. secalinus*, or *cheat*)—should be selected, as presenting that peculiar form of vegetation, into which all the cultivated small grains are liable to be *transmuted*, whenever they lose their *own original character!* Let their pristine structure be what it may, they are all supposed to be converted into this identical *Bromus*, or *cheat*. Thus, we have gentlemen assuring us, that such dissimilar plants as *wheat* and *oats*, can both be so totally changed as to take on the precise form and character of that same curious *Bromus!* Nay, we even hear that *flax-seed*, being sown in a burnt soil, will often be converted into "*yellow seed*" (probably the *Camelina sativa*, of the Botanists)—a plant to which *Flax* has no more affinity, in its botanical characters, than it has to the *Horse-radish*, or the *Shepherd's purse!* It is, moreover, gravely inquired *how*, or *why*, this strange event happens? To which I reply by another question—which ought to be the first determined—*Does it happen?* It is always best, I think, to *ascertain* extraordinary facts, before we spend our time in trying to *explain* them. I consider it vastly more probable, that every plant springs up from its *own peculiar seed*, than that it should be the *transmuted product* of any other *distinct species*. I have not the presumption to imagine, that I can succeed in eradicating a notion, which has resisted the learned efforts of the celebrated *Linnæus*, for the greater portion of a century. All I aim at, is to submit a few hasty remarks, in the hope that they may induce some of your readers to scrutinize the subject a little more closely—and to examine the doctrine in a spirit of philosophic caution, instead of taking it for granted.

W. D.

West Chester, Pa. March 3, 1838.

For the Farmers Cabinet.

Veterinarian.—No. 3.

In my last number I treated of urinary calculi generally, and of those in the kidney in particular.—I shall now speak of

2. Calculus or stone in the ureter.

It has been intimated, that the ureters are two narrow, fleshy tubes, commencing with wide funnel-shaped mouths at the kidneys, and opening on the inner coat of the bladder.—Their office is to convey the urine to the latter organ.—When a stone forms in the kidney, it readily passes into the expanded mouth of the ureter, before it has acquired much size, and may reach its destination in the bladder, without causing any great inconvenience. Owing to this circumstance, stone is but rarely found in the kidneys.—Sometimes, however, the calculus is arrested in its passage through the ureter—inflammation and tumefaction is produced, and the urine

accumulates above the obstruction. This condition of things is productive of severe pain, and great febrile excitement. As the ureter becomes distended with the urine, the stone is often liberated, and gradually sinks lower till it reaches the bladder, when the symptoms rapidly subside. But, the stone may become so impacted that it cannot move—in which event, one of two things, equally fatal must happen.—Either, ulceration will take place at the point of obstruction, and allow the urine to escape into the cavity of the belly—or, the ureter will burst from over distension. The violent symptoms may subside for a short time, but the respite is delusive.—The presence of the urine, in the cavity of the abdomen, will speedily produce peritoneal inflammation and destroy the animal.

There are no signs whereby the presence of a stone in the ureter can be positively determined, during the life of the animal—nor any *special treatment* which the case admits of. The pain and fever may be accompanied with demonstrations of disease in the urinary organs, and should be combatted, on *general principles*, by the use of depletory and relaxant remedies.

There are, however, some French veterinarians, who recommend in cases where the stone in the ureter is suspected, to pass the hand into the rectum,—feel for the obstructing body, and endeavor to press it forward to the bladder.—If the effort should prove unsuccessful, they again propose, to cut through the bowel and ureter, and extract the stone through the anus.—Both propositions would be found extremely difficult of execution, if not altogether impracticable, and the latter operation, would, probably, hasten the final catastrophe, by opening a direct passage for the urine into the cavity of the abdomen.

3. Calculus or stone in the bladder.

A stone may either originate in the bladder, or be derived from the kidney, in the manner described.—No doubt many stones do pass off through the urethra, and are happily disposed of while small.—But owing probably, to a part of the bladder depending, horizontally, below the neck of the organ, they are sometimes retained until they acquire a size which will no longer permit them to escape.—The animal may then be said to have stone in the bladder.

Unfortunately *such patients* cannot render their sufferings sufficiently intelligible to enable us to form certain conclusions respecting their diseases.

The signs of stone in the bladder are such as strongly indicate an affection of the urinary apparatus—especially, during what is called *a fit of the stone*—for the symptoms vary greatly in intensity. There is a frequent, or almost incessant, straining to make water, without obtaining any, or only very partial relief,—the little which passes being often tinged with blood;—A shivering of the posterior extremities; frequent change of position, looking mournfully towards the flank; fever comes on, the appetite fails, vermination ceases, and the muzzle and mouth becomes dry and hot.—These are the *presumptive signs* of stone in some part of the urinary organs, but they are not *conclusive*. The hand must now be introduced into the rectum. The bladder will be easily felt, forming a round, elastic tumor within the pelvis.—By gentle pressure, the contents of the bladder will, generally, be discharged, and if a stone exists therein, it can be felt, and its size determined.

If the annimal is not in beefing order, or, is too much diseased to be used in that way, the operation for removing the stone should be performed.

Having thrown and properly secured the animal, the operator will cut down upon the urethra, where it passes round the bone of the pelvis, below the anus.—By cautiously using the knife, he will easily enter the urethra.—A straight grooved directory, is then to be carried into the bladder, and the point of a probe-pointed bistoury, or other convenient instrument, carried along the groove—cutting upwards and outwards, to one side of the anus, until the neck of the bladder is sufficiently divided to permit the extraction of the stone, which should be done with forceps constructed for the purpose.—Or, the right hand may be carried within the anus, while two fingers of the other hand are placed in the bladder.—Thus situated, the right hand will direct the stone between the two fingers in the bladder, which serve to guide it through the wound. If an artery of much size should bleed, a ligature must be applied, by means of the tenaculum or needle. Where the external wound is large, one or two stitches may be used, but in such way as to allow the urine to escape freely through the lower part of the opening.

It has been recommended to facilitate the first stage of the operation by a previous one. To cut down upon the penis, before the scrotum,—draw it forward, so as to obliterate its curvature, and to pass a directory, within the urethra, as a guide for the knife, in cutting into that canal. It appears to me that such a course would be attended with more trouble and difficulty to the operator, and more suffering to the animal, than to proceed, direct ly to final operation, as I have recommended.

After a few days, the urine will resume its natural channel, and the wound heal.

New Garden, 2nd Mo. 25th, 1838.

For the Farmers' Cabinet.

Cultivation of Corn.

The best method to ensure a full crop of corn, according to the quality of the land, in my opinion, is simply this; plough your ground well, completely turned six or eight inches deep, early in the spring, and about the twentieth of the fourth month harrow twice lengthwise; great care should be taken not to displace the sods or the furrows. Then, if the ground be dry, as it frequently is about this time, pass the roller over the field; then harrow once or twice more according to the tilth of the land; mark the field three feet apart as near east and west as possible, and cross it five feet apart as near north and south as convenient, but do not mark with the plough as that will turn up more or less of the sod, or leave openings, but do it with a log with handles like those of the plough; this makes a neat mark, and the earth so moved is finely pulverized, and no sods will appear on the field. This should be done by the twenty-fifth of the fourth month, for this reason, the ground is in better order for planting about this time, eight times out of ten, than immediately before or after, and for the farmers of the middle states, it is decidedly the best time to plant. Sufficient care is but seldom observed in planting. What I call having it well done is, to drop in each hill four good grains, and cover them over with mould one and a half inches deep; care should be taken that the hoe is not drawn under the grains, as that often raises them too near the surface, where there is not sufficient moisture for them to vegetate. The hills should be broad, so that all the grains may have an equal chance to vegetate and come up straight, not springing from the side of the hill in a horizontal direction. Towards evening of each day you plant, let the part planted be rolled, or, if several hands are planting, the roller may follow, and if the ground should become wet, wait till it is dry; you had better be idle than to plant when the ground is too wet. The first rolling may frequently be omitted, but sometimes, and on some land, it is highly necessary. Harrow your ground with the furrows and quartering, but never at right angles, as this would turn up sods; my reason for being thus nice about displacing the sod is this; the egg, from which the cut worm proceeds, being deposited in the grass the fall previous (I say in the grass, for this reason, they are not found upon lands that have been tilled two years in succession) and being well turned six or eight inches deep, places the egg so deep and cold as to greatly retard the worm from coming forth, and by harrowing well, but not deep, fills up the openings, and rolling after planting, presses and pulverizes the ground, prevents washings, causes the ground to become warmer at the surface, the grain to vegetate quicker, and all at the same time, and the worm, when it does come forth is very feeble, and being buried at the depth of eight inches and the openings all closed and rolled, they cannot get at the corn in time to injure it, if planted when and as already mentioned. The worms are about half the length of a common pin, and about the same in thickness as a pin when they are first discovered at the corn; attached to them is a small web resembling that of the spider, with which they immediately cover themselves when disturbed. When land is ploughed deep in autumn or early spring, the openings closed and rolled and the corn tilled with the cultivator, or sod not broken, I have some doubts about the eggs hatching till they are brought nearer the surface. I ploughed a field between six and eight inches deep for corn early in the spring, treated as above described, farmed with the cultivator, the corn was not injured by the worm and made sixty bushels per acre. The spring following the field was ploughed and sown with oats, when they were about half grown or more they were blown and beaten down; a second crop sprung up immediately, and I scarcely knew whether to cut the first crop or wait for the second, however I cut the first and owing to the vast quantity of green oats, the crop was compelled to remain in the swarth four days, by this time all the cut worms of that field and of some others, for what I know, had collected under the swarth to feed on the green oats; in every horse track or small hollow that was under the swarth there were dozens; I counted fifty-three on four inches square; they had cut the green oats so as to cover themselves with the chaff, and they were generally found under each swarth, and I think would make about one bushel per acre—they were full grown. Now the eggs from which this army proceeded must either have lain in the earth at the depth the plough placed them or they were deposited in the ground while, in with corn, or on the field after the oats were sown, or perhaps several years ago. I presume they are no great travelers, or I should have supposed some of them were from a distance.

I have done looking after the worms. The corn once up, attention must be paid to it. I go over and replant all that have not two good stalks to the hill. Corn planted in this way, the furrow being shallow and the surface smooth by rolling, will not admit of the fallow harrow; therefore I use the cultivator, and prefer one that is much worn while the corn is small, as it does not cover the corn or disturb the sods; when the corn is out of the power of the worms, if there be any, thin to

two stalks to the hill. My corn is the Virginia gourd-seed; some kinds, perhaps, would do thicker. I run a two horse cultivator between the five feet rows which disturbs the ground and grass as they should be, and one horse the other way; the two should be used frequently, so as to keep the ground clean and mellow. When the corn is fit to plough put one light furrow to the side of each row; this should be done while the corn is small, to cover the little weeds that may have started in the hills; in a short time put one heavy furrow to the other side of each row, which must be followed by the hoe to cut out the weeds, &c. If the sod is tough, plough the middle shallow, but if there is little or no sod, thin with two horses and plough, stir them deep. After harvest, if the grass begins to grow or the season be dry, pass the two horse cultivator, but with shorter teeth than before harvest, over it again; if this does not make a crop put on lime till it will. Ploughing just before planting, turning the eggs and grass down, and harrowing and rolling as already described, is sure to produce a good crop; when it can be performed well the ears will be larger than if ploughed at any other time, but will not ripen so early —but to this mode there are objections, the grass roots get strong, the ground settled, and sometimes or often dry and baked, the weather warm, very hard for the horses, and cannot be pulverized well without tearing up the seeds and worms, and the eggs which have been on or near the surface exposed to the sun till so late a period, soon become active depredators, and the open cloddy state of the ground afford them all chances of getting to the surface. Light land, ploughed in autumn, produces corn of good quality, it grows off well in spring, ripens early, but the ears are small in comparison with those from spring ploughed land; and much more tillage required, and rather heavy land ploughed in autumn becomes so compact by planting time as to render reploughing or double furrowing necessary, and even then produces small ears, whereas if ploughed early in spring, before night freezing is over, produces good corn both in quality and quantity—some land is too heavy and tenacious for corn, plough it when you will, but such should be top dressed and kept for pasture.

EPICURUS.

Mill Creek Hundred, New Castle Co. Del.
2d Mo. 24th, 1838.

N. B. I have frequently known fall ploughing to be reploughed or double furrowed before planting, aud I have almost as frequently known the worms to be very bad, often destroying the crop. This is produced, I presume, by turning the eggs up for the sun to animate them, whereas they would not be ready for the corn till out of their way, if the reploughing had been omitted. I have frequently heard farmers complain that after ploughing in autumn, and reploughing in spring, and putting the land in fine tilth, the cut worm entirely destroyed the crop. Turn the eggs down in autumn, out of the way of frost, and to the surface and sun in the spring, and if the corn is not injured it is because there are no eggs there. E.

To the Editor of the Farmers' Cabinet.

On Sheep.

The sheep fed in this section, are mostly brought from the west,—are of a small size, their weight, from twelve to eighteen pounds, per quarter,—but few are bred here, and the farms being divided into small enclosures, large flocks cannot be kept advantageously. The full blooded merino, is a valuable breed, a few of them, should be kept by every farmer, for his own family use. They will shear, on an average, about seven pounds of wool in the dirt, and will, when fat, weigh fifteen, and sixteen pounds per quarter. By the industry of the family, and a small assistance from the manufacturer, the house can be supplied with fine cloth, flannel, &c. The cost of manufacture would not exceed five cents per yard, more than coarse, or common cloth, and it would sell for about double the price.

A friend of mine living in Chester county, within a few miles of this, has a buck, which he imported from Devonshire, England; his live weight is three hundred pounds; short legged, heavy bodied, and well quartered, and is considered a good feeder by the best judges,—his wool is long and coarse. This stock crossed with the merino would be valuable on account of the wool; being more suitable for stockings, blankets, and cloth for working men, and would make good feeders. The ewes, when fat, will weigh twenty, to twenty-five pounds per quarter.

When few sheep are kept together, they will thrive better, and produce more wool. When they are found amiss, open the hole between their hoofs, where they join the foot on the upper side, and attend to it a few days, until the discharge is regular from it; keep their locks clean; salt them frequently, and with such treatment, a flock may be kept nearly free from all diseases.

A BRANDYWINE FARMER.

Wilmington, March 3, 1838.

A good farmer is generally a true friend, an affectionate husband, an excellent parent, and an honest man; and it is an established axiom that a *well tilled field*, denotes the supervision of an enlightened mind.

To the Editor of the Farmers' Cabinet.

Preparing Corn Stubble for the Plough.

As the season is approaching, in which farmers prepare their corn stubble for the succeeding crop, I propose throwing out a few hints on the subject of preparing it for ploughing—to be left in the best condition for receiving the seed of, and taking off, the following crop. Since experience has confirmed that cutting off corn at the ground, is preferable, in an economical point of view, to topping it above the ear—that method has generally been adopted by those farmers, who make economy a prominent article in their agricultural creed. It might be asked, what can be done to make it in a better condition for ploughing, than by cutting the corn off at the ground! Farmers, try it for yourselves.

The object to be attained, is to prepare the stubble to be in such a condition, that most of it may be ploughed down; and being ploughed down, not to be drawn up again with the harrow, in putting in the following crop:—In the practice of cutting off corn at the ground, unless more especial pains be taken, than is usually bestowed, a stubble of some six, eight, or ten inches will be left. In this case farmers sometimes scalp them off even with the ground with a hoe, to make it in a condition more suitable for ploughing.

Another method has been adopted by many farmers, which has been found to answer the purpose better than scalping. It consists in passing the harrow twice over a row, or in other words, *going a round to a row.* This should be done early in the spring before the ground becomes completely settled. Where both plans have been tried in the same, or adjoining fields, it has been found that that which was harrowed, the corn stubble ploughed down better—and those that were ploughed down, were less drawn up than where they were scalped. Hence, they would obstruct less in applying the seed, and taking off the crop. Again I would say, *farmers try it for yourselves!*

A.

Chester County, Feb. 24, 1833.

For the Farmers' Cabinet.

Remarks on the Treatment of Animals.

I have frequently observed in the daily papers and other prints introduced for popular view, *receipts* for the cure of wounds, sores, and other complaints in horses; some of them inert, and others excellent, if judiciously used; but most of them—given, as they usually are, without special directions for the discriminate use of them—positively injurious. There is the same necessity for the exercise of judgment, and for the observance of care in the employment of curative means in practising successfully upon the inferior animals, that there is in the treatment of the diseases of the human family. A man can no more be a good horse doctor without applying the energies of his mind specially to the subject, than he can become eminent in any other pursuit in life without toiling to make himself so. Quackery therefore, even upon the brute creation, should be discountenanced, and in the graver diseases of our domestic animals, advice should be sought in an inteliigent quarter. But as there are frequently occurring complaints and casualties of an ordinary and simple character, we may trust in such cases to our own faculties, provided, we make a proper use of them. A little observation, a just appreciation of the recuperative powers of nature, with which all animals are endowed; and the exercise of common sense, and humane feelings, may be said to embrace all that will be found necessary in such cases. It is pity enough that the horse should have so many ills incident to his domestic life, and to our abuse of him. We ought not, therefore, by our ignorance and officiousness to add to his suffering by resisting, as we often do, the kind and persevering efforts which nature makes to restore him to health. We first chafe a poor beast by mal-adjusted and unsuitable trappings; next fret and jade him by the repeated use of them, until the galled part generates into a sore; and then seek a remedy in painful and injurious nostrums; whereas, by simply keeping the part clean, covering it with some unirritating and balmy application, and defending it against further mechanical injury, *nature* will speedily effect the cure. We take a young horse from the habitual use of pasture or soft food; put him into a stable and feed him upon grains, hay and other harsh food, and thus cause the tender roof of his mouth to become so swollen and inflamed that he cannot eat. He consequently pines for want of sufficient nourishment. The farrier tells us that he has the *lampas*, and immediately with the *twitch* screws up his upper lip to agony, in order to render him incapable of resistance; and then sears the whole roof of the mouth with a red hot bar of iron.—Whereas by restoring the poor animal to his wonted soft food for a week or two he would be effectually cured; and by the gradual introduction of the harsher foods into his messes, a return of the complaint would be entirely obviated. Thus it is also with a variety of the complaints of the kind, causing lameness, swellings, &c.

A horse is transferred from the country, where he has been accustomed to soft and

natural roads and clay floors, to towns and cities, where he is driven over turnpikes and stone pavements and lodged on plank or perhaps stone floors. The consequence of such a transition, is that he becomes lame from swelled limbs, splints, windgalls, quittor, &c., &c. Forthwith the poor beast is subjected to rowelling, firing, blistering, caustics, aqua-fortis &c., for the purpose of curing which, in most cases, a removal of the causes alone is necessary—as nature will do the rest. These are but examples of the tissue of errors extended throughout the whole treatment of unsound horses. The whole system is a bad one.—It is cruel and unprofitable quackery. I would therefore advise those who keep horses to seek the advice of an intelligent and skillful veterinary physician, when such a one can be found, in all obscure and complicated diseases; and in the ordinary complaints and casualties, to beware of resorting to harsh and tormenting, as well as disfiguring remedies; to learn how adequate nature is to remove diseases, and to repair injuries, provided she is not in her operations impeded, resisted, baffled, nay! as she often is, really subdued by meddlesome man. There is that certain, though inexplicable power, in the animal economy by which diseases may be cast off, and injuries repaired—a principle inherent in and inseperable from life, and on this we should mainly rely. We may render ourselves auxiliary to the cure, but cannot force it contrary to nature's design.

MEDICUS.

For the Farmers Cabinet.

Borrowing.

The lender is servant to the borrower.

Will you permit an old fellow who has seen some service in farming, and who has been a subscriber to your very useful paper since its first publication, to occupy a few lines in the Cabinet, for a purpose that perhaps some may consider of little importance.

The purpose indicated by the heading, to wit:—Borrowing, in many neighborhoods, and amongst considerate thoughtful farmers is not much practised; yet there are individuals who through downright carelessness and neglect of duty to themselves and their more provident neighbors, are much given to this species of imposition. A proper spirit of accommodation, and a disposition to oblige and reasonably to promote the interests of neighbors, should always be encouraged and promoted, but it should never be carried to the point where it would assume the character of a regular systematic plan of operations.—*Those who borrow, should resort to it as seldom as possible, and always return the article borrowed as early as practicable, and be sure that it is returned to its owner in good order.* This is but a very plain principle of common sense and justice, and yet there are very frequent instances of its infringement, and that among well meaning, yet inconsiderate people. On the farm that I was reared, care was taken to keep the implements of agriculture in good order, and to have a proper supply of them, but we had neighbors in good circumstances who instead of depending on their own resources, were constantly borrowing, first one article and then another, the year round, and it was somewhat of a rarity for them to send any thing home again; for they seemed to think it trouble enough to come for it in the first instance.—During my boy-hood, it fell to my lot when a loaned article was wanted to trudge off to the neighbor who had borrowed it and bring it home, and it was not unfrequent that it was unfit for use when brought home, and sometimes there was demur at the surrender of a borrowed article. Now I hope there has been improvement in these matters since I was errand-boy, yet I fear there is still room for admonition on the subject of borrowing, and I concluded to drop you these few lines, that the boys of the present day, may know what has been the experience of those who were boys fifty years ago but are now

OLD MEN.

For the Farmers' Cabinet.

Bees.

I have had some experience in the management of Bees for upwards of thirty years. The first knowledge I had of the *miller worm* was about seventeen years ago, since which period they have been very destructive to my bees, particularly in wet seasons. I have read with attention several treatises on the history and management of bees, the proper construction of hives, &c., in order to prevent the ravages of the worm; but my success has not been equal to that of the authors. I therefore adopted a plan of my own—simple it is true—but it has so far proved successful. It is as follows:—I have several hives ready made, of sizes suitable for the swarms; I then nail two uprights to the hive; through these uprights I bore with 1 1-4 inch augur a hole; through these holes a strong wooden pin is inserted, by which the hives are hung upon a pole, made flat on the top to prevent them from swinging. I have the bottom of the hive elevated four feet from the ground. By this means, the worms, when they begin to crawl, usually fall to the earth, and not being able to re-ascend, perish—whereas, when the hives are placed on a bench, as is usually the case, the worms, losing their foothold, fall, but are en-

abled to make their way back again, and most generally, in process of time, destroy the bees. Again, bees, suspended from a pole, as above described, are less likely to fight and rob each other, than when placed on a bench. Care should be taken to place a few boards in such a position as to prevent the sun from heating the hives. In the fall of the year the hives should be taken off and placed in some suitable situation to remain during the winter. In my judgment there is no need of a bee house, as it is only a harbor for insects, particularly ants and miller worms.

If you design to put on cap hives, make the braces of a sufficient length to admit the hive. In regard to cap-hives I have had but little success—sometimes the bees would work in them, at other times they would not. I have generally succeeded much better by *splicing* the hive. When I see the comb coming down, and the hive getting full, I lengthen the hive six or eight inches by screwing on the splice. This is easily done. Make the splice so as exactly to fit the hive, set it on a bench, then take off the hive and place it on the splice, and with two small strips of thin boards screwed to each, fasten them well together, and the bees will continue on their labors as usual. I have sometimes neglected splicing and the bees have extended the comb six inches below the hive, and at the same time there was a cap hive on. Bees will fill the hive with comb, and make a certain quantity of honey and no more, although it may be in the honey-making season, for this reason, that they will always leave open cells sufficient in the comb for their accomodation through the winter. Bees placed on a bench will, in the latter part of the season, "hang out," those in this situation will cease their labors unless the hive be spliced. I weigh my hives every ten days, and mark them, so I know exactly how the bees are getting on. I make the hives out of white oak boards; yellow pine will do, but white oak is the best, as this wood, when well seasoned, tries the teeth of the worms so that they cannot bore, whereas white pine or cedar is not proof against them. The worms generally commence boring the hives the latter part of the season. They penetrate the wood, in which they pass the winter in a torpid state; in the spring they make their appearance, and frequently destroy a hive in a few days. I screw my hives together so that they may be readily taken apart without injury. I have in the winter season unscrewed a hive and taken out two or three reefs of comb and honey; but this plan will not answer. In preserving bees through the winter, be careful to select those hives that contain the largest number of bees and comb. Fifteen pounds of clear honey will be sufficient for a large hive. I have kept fine hives over; in the spring they would weigh from forty-five to seventy pounds clear of the hive, and these hives were just as likely as not to be the last in swarming. Bees that have consumed their winter stock, will commence their labor much earlier than those that have a supply remaining. As I weigh the bees I know something about it. I can weigh a hive in a minute. My plan is to hook under the pin of the hive, and take a hog gambrel and hook over it; then raise it up clear of the pole and you have the weight without disturbing the bees.

I find, from experience, that narrow long hives, say ten inches square and two feet long, are much better than those made wide and large. When I first commenced keeping bees I made the hives wide, from fifteen to seventeen inches square. The bees would remain only a few days, make a little comb in one corner of the hive, and then swarm again, and either go off entirely, or return whence they came. In the narrow hives they generally appear contented and do well. Sometimes, however, they appear unmanageable—in this case I do not meddle with them, and in the course of a few days they become quiet.

M. B.

West Jersey, March 5, 1838.

For the Farmers' Cabinet.

The Roller.

This implement which has come into general use, only within the last few years, is of so deservedly an useful character, that it now ranks in importance with the plough and harrow—and no farmer can consider his stock of agricultural implements complete, without the possession of one of these. They are principally constructed on two plans, the one consists of a single cylindrical piece of timber set in a frame, in which it revolves, by gudgeons, the other, of two such timbers, each of which is half the length of the single one. The latter is preferable in the turning of the angles of fields and lands. The objects to which it can be advantageously applied are various:—Grounds, which remain cloddy after being ploughed and harrowed, can be reduced by the roller to a state of pulverization, which with the harrow only, could scarcely be accomplished. Crops, succeeding Indian corn, may be taken off with much more facility, particularly if they be heavy and lodged, by having the corn stubble and other protuberances levelled down with the roller.

It is of considerable utility in mowing grounds, by pressing small stones in the ground, which would otherwise impede the scythe in the mowing, and by levelling weeds to the ground, which greatly facilitates

their decomposition. Grain, which has been frozen out during the winter, may be considerably benefitted by passing the roller over it and bringing the fibres of the roots in contact with the earth again. There is another object to which I would invite the attention of farmers—in the use of the roller—that is, in the preparing of their ground for corn.

The roller may be used to great advantage on any sod after being ploughed, by making the ground more compact, which will facilitate the decomposition of the sod and render it more impervious to drought. In corn ground in addition to the above, it prevents the furrows from being moved by the cultivator in the dressing of the corn and renders the ground in much finer tilth than it would otherwise be with the same labor, without the roller.

A

Chester County, March 16th, 1838.

To the Editor of the Farmers' Cabinet.

Canada Thistle.

Dear Sir,—Having seen an article in this month's number of the Famers' Cabinet, requesting information as to the best means of destroying the Canada thistle, I send you the following:—In all grass lands the only thing necessary to be done is to seed it down with timothy and clover, taking care first to prepare it well by ploughing, &c. My father-in-law, one of the best farmers in Washington county, N. Y. had a piece of grass land completly overrun with them. Three years ago he ploughed them under and seeded the land with timothy and clover, mixed with oats. The first year the thistle was nearly all destroyed—the second year he had a fine yield of grass, as also this last year, no thistle appearing among it—but on stony lands it is impossible to get rid of them at all, at least by any means as yet known.

E.

New York, March 20, 1838.

To the Editor of the Farmers' Cabinet.

Farming in Kent County, Md.

I have read in your valuable paper, reports of what farmers are doing in many parts, and have thought it fair that they should know something in return about us, in Kent county, Maryland, and, if it be of no edification, it may, nevertheless, afford some amusement to your numerous readers.

Our farms are large; three hundred acres is rather a small farm. We plant large crops of corn, say eighty to a hundred acres. The cultivation of this crop requires a number of working beasts and hands; to feed those hands we must raise a good number of hogs; the hogs eat up the corn, and we eat up the hogs, so that at the end of the year we have but little surplus for market. If a farmer raises two thousand bushels of corn and sells six hundred, he is doing well; beside all this, the farmer keeps a saddle or harness horse, and sometimes both. It is very common to say "the land is too poor—I cannot live on it." However we are going to do better, since our honorable geologist has paid us a visit and innoculated us with the marl fever. I think we shall now "go ahead." I should be very much pleased if some of your readers would give us the result of their experiments with green sand, its component parts, and the quantity to put on an acre. We have large quantities of it, but have little practical experience in regard to its application. Your friend, Kent.

For the Farmers' Cabinet.

Apple Orchards.

I have observed that the generality of orchards decline in about twenty-five or thirty years. This is owing to many causes. First, the sowing of oats, which seldom fails to kill the trees; it ought never to be done; again, in about the time specified, the tree has exhausted the land, which is too poor to support it. I would recommend the following plan—the benefit I have proved. Grub round the trees and take the mould and grass away; then manure them; take off the old scruffy bark—a spade is a good implement for this. Then let your hands take a stick about two feet long (the end in each hand) and rub briskly up and down; this will, in a small degree, loosen the bark, and give room for the sap to flow freely. After this you may put round the trees, say the second year, corn cobs; those from your hog pen are best. Cut off the sprouts but no large limbs.

A Subscriber.

To the Editor of the Farmers' Cabinet.

Culture of Hemp and Flax.

We frequently see the culture of silk recommended in the Cabinet. It would, in my judgment be of greater interest to the farming community in general to pay more attention to the culture of *wool*, and also to that of *hemp* and *flax*, as the wearing apparel made from these articles is far more serviceable, than that of silk. Let the farmer give his sons and daughters a good education; then let them labor with their own hands, and thereby become familiar with that industry and economy that is essential to the successful and thrifty farmer. First, let the son take hold of the plough; learn the management of a farm; acquaint himself with the different kinds of stock—in a word, let him be instructed in all that is essential to constitute him a

good *practical agriculturist*; then when he sets up for himself, he will labor under no embarrassments arising from a lack of knowledge in his calling. Every one ought to be deeply and thoroughly impressed with the vast importance of understanding fully his duties, and discharging his obligations with fidelity and punctuality.

The wearing apparel of a farmer should not only be prepared by his industrious wife and daughters (and every farmer should be so blest) but it ought to be the production of his own farm, instead of going to cities and towns to purchase imported broad cloths on credit, by which, at the end of the year, his store bill will balance that of his farm. Too many farmers and mechanics, deeming the employment in which they themselves have prospered, too humble for their sons, have directed them to the fancied dignity of the learned or mercantile professions. Extravagance, of course, kept pace with this erroneous principle—agriculture, the main business of our country and the source of its wealth, was neglected—to this was added, the successive failure of crops—provisions doubled in price—*the importation of foreign grain commenced;* and when pay day came, as it always assuredly does, thousands, who thought they stood firm were reduced to bankruptcy, either by their own indiscretion, or the failure of those for whom they had vouched.

Our forefathers with industry and economy succeeded in obtaining a decent and comfortable living for themselves and families; but our expenses, have on an average, within the last thirty years been quadrupled. No necessity existed for this—nothing can justify it. To correct the evil we must wed the hands to labor,—the head to knowledge—we must practice economy and industry. Those who have forsaken rural labors, and been disappointed in their Utopian dreams of riches and happiness, should return to their legitimate calling—they will be kindly received, and amply remunerated for all the labor they may bestow upon the soil, which never refuses to yield a rich return to the fostering hand of industry. We live too high—we dress too fine, and we have the fashion of cooking, eating, and dressing from at least four different European nations to follow.—Let every farmer's daughter then, be fully instructed in all that pertains to intelligence, industry, domestic economy, in all things necessary to render her a frugal *industrious house-wife*—a comfort to her husband and an ornament to society. Our nation is as one family,—whatever benefits one class or one district, indirectly benefits the whole; so that what injures one class of people, or one region of our country, indirectly inflicts an injury upon all. A reformation in the habits of the people is necessary to a system of industry frugality, and prosperity.

N. P.

Lancaster Co., 3d Mo., 1838.

For the Farmers' Cabinet.

Fruit Propagation Farms.

I would suggest for the consideration of farmers and others, whether the subject stated below is not of sufficient importance to lay before the State Legislature for their action, that if approved, it might receive the fostering care of the government—and as the subject is one in which party can scarcely find a place, both bank and no bank men might unite—nor do I see that the warmest friend to the cause of temperance need be alarmed thereat, as there would be no necessity for making more cider, wine and whiskey, because we had good apples, pears, peaches, plums, cherries, &c. than whilst we have those of an inferior quality; nor do I suppose that there would be as much, for our interest tells us that we can get a better market for our fruits of an extra quality, in their natural state, than in any other way.

The plan I would suggest would be for the State to procure a tract of land on each side of the mountains, or in other words, one in the eastern, the other in the western section of the State, of two hundred acres each, and appoint, in such way as the Legislature may judge best, suitable persons to have charge thereof, and be called Fruit Propagation Farms, the expense to be borne by the State; as it would be several years before there could be much benefit derived from the fruit. The land not planted might defray a part of the expense—but my views do not extend to a present money making concern, or else I would by all means recommend a private company. In the purchase, care should be taken both as to soil and situation. It should be properly prepared previous to planting—I would neither lime nor manure much, as I am of the opinion that either of them has an injurious tendency on fruit trees, the ground being of a good quality and not reduced by cropping, is the best, I apprehend, for the health of our fruit trees, which, like the human family, enjoy the best health when living in a state of natural simplicity. A portion of the ground being properly prepared should be planted with the seeds of apples, peaches, plums, pears, cherries, &c. Every year, and at early periods, set out the plants in situations where they might remain, if found worthy—but inasmuch as there would not be found one perhaps in fifty that would be worth preserving, their distance apart need not be great—in this way I would propose proceeding to plant out several hundreds

every year, and have them well cultivated to hasten their maturity, and when arrived to a bearing state, (which for some kinds would require several years,) all such as were not of a superior quality should be removed to make way for others; but such as were found on a full trial of superior quality, should remain to propagate from, and grafts or buds freely given to such as applied for them. Thus, in time, the whole country would receive an extensive benefit in the increased value of its fruits—if it should be thought advisable, a portion of the ground might be appropriated to the culture of such of the present varieties as are well known to possess superior qualities, thereby increasing the facility of acquiring the desirable kinds, by nursery men and farmers, in setting out orchards. The primary object, however, should never be lost sight of, to wit, the propagating of *new varieties*, as common experience has taught us that nearly if not quite all kinds of fruit degenerate, some sooner, some later; the trees becoming sickly, and fruit decaying much sooner than it did originally —every person who has given attention to the subject for 50 or 60 years, must have observed that many varieties, in the course of that period, have so far run out as not to be worth planting, and that a few new kinds have come on the stage which have been of great public and private benefit. If the foregoing plan, or something like it, should be adopted, I trust that succeeding generations would have a greatly increased variety of the different kinds of fruit, and some of them probably far surpassing any which we at prepresent have; whereby they would be enabled to plant with a good degree of certainty of reaping to advantage, instead of, as at the present time, taking much care to grow trees that, after all their care, soon decay without by any means recompensing for the trouble. Under these views and considering that the seeds of most kinds of fruit do not produce the same as the parent tree, I think our being supplied with good fruits has been too long left to chance, such as seeds dropped by the sides of fences, or ditch banks, &c. and one occasionally chancing to be of some new and excellent variety from which we propagate; such I believe to be the history of the Seckel pear, and most others of our favorite fruits. When individuals plant they wish as speedy an increase as possible, therefore will not plant from seed, and wait several years, and then very likely have to remove all of them. The foregoing hints are thrown out for consideration by a

MONTGOMERY COUNTY FARMER.

2d mo. 24th, 1838.

For the Farmers' Cabinet.

Advice of a Farmer to his Boys.

Come boys, let us see if we can't farm a little better this season than we did last. I think we can if we make an effort; and if every succeeding year we outstrip the preceeding one, I think in a few years you will be able to set up for yourselves. We have already sown our grass seed this spring, thicker than heretofore, which there is reason to believe will amply repay us for the additional seed, as we have heretofore always had more or less bald places in our grass fields, or had them filled up with weeds. We have some seed oats which weigh ten or twelve pounds a bushel more than the common kind we have usually sown; this cannot fail to be an advantage of at least 25 per cent over the light stuff we have had in former years, and if it is found to become lighter by being re-sowed; we must change our seed again at a future time. As for Indian corn, the "Dutton," of which we have plenty for seed, I think will answer our purpose the best of any kind I have seen, if we put it in handsomely and give the strictest attention to the dressing of it with the cultivator; let us give it a couple of extra dressings during the summer, and keep the ground as mellow as an ash-heap; this is the only way I know of to make a good crop of Indian corn. It suffers more from neglect than any other crop we cultivate; but stop—let us collect our ashes together and put a handful of it, with as much Plaster of Paris, on each hill as soon as the corn is fully up; this pays well for expense and trouble.—But I am getting wrong end foremost with my plan; be sure when you go to the city next week, to buy a pound of salt-petre to make a steep for the corn before it is planted; this is said to be an excellent plan, as the corn comes up much more vigorously after being soaked in saltpetre, and is sooner out of the way of the birds and grubs, which is a matter of great importance. Well, we had forty bushels to the acre last year; now can we go fifty or sixty this, if the season is favorable, and we pay strict attention to it; let us try for it any how; and one thing I am certain of, that our success will be in proportion to our exertions, other things being equal. We must increase our potatoe crop, and raise an acre of sugar beet, and the same quantity of ruta-baga for winter food for our cattle and sheep; the attention to these root crops is light work, and I think need not interfere with our other business; besides, I intend to buy neighbor Jones' old still, as he has quit making whiskey with it, since his two fine promising boys have gone to destruction by the use of that vile article. I think he will sell it cheap, as it sickens his heart to think

of a still, since the prostration of all his prospects for the advancement of his once fine loys. We can fix this up so as to steam our roots and grain for the hogs and cattle, and I have a great notion to try it on cut corn stalks and hay, for it is said they go much further, and feed better by being cut and steamed.—The millers' toll may also be saved by steaming the grain we feed, instead of having it ground. If all the stills in the country were used for preparing food for animals, instead of making poison for men, it would save at least ten millions of dollars annually, and clear out most of our poor-houses and jails, and prevent many a parent from going to the grave with a broken heart. Let us turn to to-morrow morning right early, and drive on our work vigorously during the season, and with the blessing of Providence on our united exertions we shall find ourselves blessed in basket and in store, even beyond our deserts.

Abram.

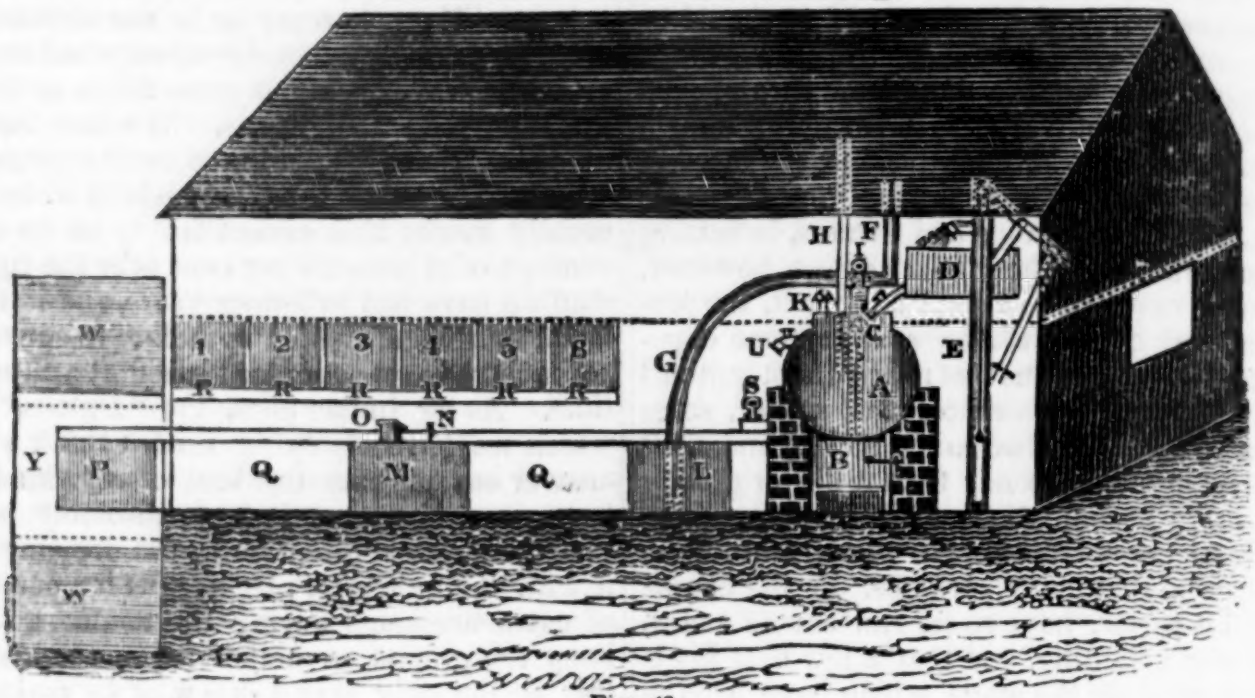

Fig. 43.

For the Farmers' Cabinet.

Steaming Apparatus.

Mr. Editor,—I herewith send you a model of my steaming apparatus, calculated to answer for a common farmer to feed from 30 to 40 head of hogs, and steam and scald feed for 10 or 15 head of cattle. My boiler is nothing more nor less than an old still kettle, and contains about 60 gallons. I can steam about 15 bushels of potatoes or any other kind of roots at once, and make boiling water enough to scald meal for 40 head of hogs at one time, enough for one day. I have a lid fastened down on the boiler head, air tight, with small screw bolts. A represents the boiler. B furnace. C. a tube to supply the boiler with water from D. (and runs to the bottom of the boiler, as you cannot fill your boiler when the steam is up otherwise,) with a stop cock; whenever you are filling the boiler with water, if the steam is up, you have to open the cock K, and gage your boiler by stop cock U; never fill your boiler higher than stop cock U, for steaming or other purposes. D is a trough to contain water to charge the boiler. E. pump. F. escaping tube. When you are done steaming you reverse the steam from G. by stop cock I. and let it escape through the other end at F; that tube is 1 3-4 inches in diameter. G. conveys the steam to L. where you steam your roots, or whatever you wish to steam. L. is a box with a lid, large enough to contain 15 or 20 bushels, just as you wish; tube G. passes into the back part of box L. and runs to the bottom as is represented. Several holes are bored in the bottom to pass off the water that collects in the box while steaming, and there should be two half inch holes bored near the top of the box, for the steam to escape. H. is a safety valve, or answers that purpose; it is 3-4 inches in diameter, it runs within ten inches of the bottom of the boiler, and 8 or 10 feet above the boiler; the upper part is tin, the part in the boiler is copper; whenever the water is boiled down below the bottom of the valve the steam will escape up through the valve, and then it is high time the boiler is supplied with water; when the water is above the bottom of the valve the steam will not pass up through the valve. M. is a box to scald meal of any kind for slop for cattle. Immediately over the box M. is a small trough T. which conveys the hot water to M. or to P. so that you can scald for cattle in M. or let it pass to P. and scald for the hogs, as you will see a pin N.; you can draw the pin and bring the water from the boiler, shut down the gate O. and it will pass into M. or put in pin N. and draw gate O. it will pass to P. QQ is the entry or

passage through the steam house to the hog pen; W W are the two hog pens. Y. is the feeding place. The dotted lines represent the troughs, each pen 10 feet, to be extended as deep as you wish them; the entry 8 feet in width, the door should go out of the entry QQ into the pen at P. The dotted line in steam house represents the back part of the steam house. 1 2 3 4 5 6 represent stalls for feeding cattle. R R R R R R is a trough where cattle are fed from entry QQ. My whole building, with machinery, is put up very economical. I sunk a range of posts in the ground, 9 feet high in front, 32 feet long, 6 feet in the back, and 18 feet in width. The back side I took the common 5 hole fence posts, put them in 3 feet six inches apart, which form my stalls, 11 feet long, 3 rails in each pannel, the trough rests on the lower rail and is fastened to the second range of posts that you see in entry QQ; all the cost of my building does not amount to more than fifty dollars. I bought an old still kettle for ten dollars, the tubes cost about twenty-five dollars, the brick I used for the furnace and chimney I do not count any thing, as they can be applied to other uses at any time, if I abandon the steaming. I covered my steam house with boards, and weather boarded the house with rough boards which I consider convertible into other purposes; so that I consider all the outlayings of my whole building, and to pay mechanics, would not exceed fifty dollars. Some prefer boiling the food for stock, but what little experiment I had of it, I would prefer steaming.

REFERENCE TO THE ENGRAVING.

A. Boiler. B. Furnace.
C. Feeding Tube. E. Pump.
F. Escaping Tube. G. Steaming Tube.
H. Safety Valve. I. Reversing Cock,
K. Stop Cock to open when filling boiler.
L. Steaming Box to steam roots, &c.
M. Scalding box to scald meal for cattle.
N. A pin to let hot water down from T.
O. A small gate to stop the water at M. or let it pass to P.
P. A box to scald meal for hogs.
Q Q. The Entry in steam house.
R R R R R R. A trough to feed stock in steam house.
S. Stop cock to draw water out of the boiler.
T. A Small trough to convey hot water to M. or P.
U. A Stop cock to gage the water in the boiler, to know when the boiler is full enough.
1 2 3 4 5 6. Stalls for Cattle.
W. W. Two hog pens.
Y. Entry or Feeding place.

J. FRANTZ, Jr.

Lancaster County March, 1838.

For the Farmers' Cabinet.

Guessing.

The area of every enclosure on a farm ought to be ascertained, in order to determine with some degree of precision the quantity it produces per acre, as well as the quantity of seed or plaster sown per acre and to regulate the manuring and the labor with some degree of accuracy. Fields being generally rectangular, very little difficulty would arise in determining the number of acres in each, and when once ascertained a record could be kept, that would render further trouble unnecessary. Many farmers depend too much on *guessing*, as to the quantity of land and the produce per acre, and those who are not pretty knowing in such matters are supposed by some, occasionally to make great mistakes, that sometimes involve a suspicion of their veracity. If the size of fields and the amount of their produce were accurately registered in a book kept for that purpose, it would be but little trouble, and it would furnish an agreeable amusement for a rainy day, to compare the products of different years from the same ground; by this means a farmer would always be able to determine the improvement and increased fertility of his farm, and if at any time he should incline to furnish an agricultural journal, with the results of any of his operations, it could be done with confidence as to its accuracy, which would be satisfactory and instructive to the public.

A farmer should never *guess* at results when he has the means in his power of arriving at truth so easily. Keep a regular account of all articles sold and purchased, and at the year's end balance your book, so that you may know your latitude and longitude, and not be in danger of receiving a visit from the SHERIFF.

For the Farmers' Cabinet.

Rewards of Industry and Economy.

As it is a rational desire for farmers, in common with their fellow citizens following other pursuits, to make a comfortable living for themselves and their families, and to accumulate a reasonable fund for contingencies, and for giving their children, or others dependant upon them a start on the journey of life; I design to furnish some of the results of my own experience and observation on the means most likely to accomplish those desirable and meritorious objects. I started out in life a poor boy, destitute of property, being thrown on my own resources, as tens of thousands annually are in our country, and by *industry and economy*, with the *blessing of Providence* on my exertions, I have now advanced pretty well on towards the natural period of the termination of my earthly ca-

reer; having always lived in comfort, and it looks likely that I shall be able to leave quite enough to those who may come after me, to promote their best interests.

Let young men set out in life with a firm reliance on the superintending providence of God in all the things of this world, and resolve to ply the hand of *industry* in whatever calling they may be engaged. Be *prudent;* pursue *a rational economy;* despise not SMALL GAINS; and under the ordinary circumstances of life you will be prosperous, perhaps rich.

The prospects in life of more industrious young men are frustrated by the effort to get great gain quickly, than by any other cause whatever. Small accumulations, well husbanded, are the most certain and effectual in promoting comfort and wealth; the truth of this remark you cannot fail to see verified in every district of our country; but "those who seek after sudden riches fall into temptation and a snare."

I have often heard young men despise the idea of making but 100, 200 or 300 dollars a year, thinking it beneath their notice; and I have lived to see some such persons receive charity from the hands of the servants of their fathers. It is by no means an unusual circumstance in our country to see those who were "bound boys" to farmers, by industry and good conduct rise to opulence; at the same time that their master's sons who were thought to be born to wealth, for want of those qualities, have ended their days in penury.

An experienced old gentleman, many years ago, when I was young, gave me some very judicious hints on the subject of "small gains," and explained to me the manner in which they accumulated, and what the end would be, if followed up carefully; and if you have no objection, Mr. Farmer's Cabinet, I will give you a table that is true to a figure, and which will show the wonder workings of money if it be let *alone* to accumulate; and I would have you observe that the same result will be produced, only in a much more *extraordinary degree*, by adding each year, *not money*, but ADDITIONAL FERTILITY to the same amount to a farm.

One hundred dollars put to interest at 6 per cent, and an additional $100 added to it each year successively, together with the interest accumulated for 10 years will amount to $1318 07

An annuity of $100 in	20 yrs.	am's. to	3678 55
do	30	do	7905 81
do	40	do	15476 19
do	50	do	29033 59
do	60	do	53312 81
do	70	do	96793 21
Annuity of $100 in	80 yrs.	am't to	174659 98
do	90	do	314107 51
do	100	do	563836 80

Only think of it! the poor despised 100 dollars a year! see the wonderful workings of it! it is almost incredible! I could scarcely believe it myself, if I was not positively certain the calculation was correct to a figure. Now is there a farm of 100 acres within 30 miles of Philadelphia, that by ordinary management would not produce 100 dollars per annum, clear; or that would not enable its owner to add 100 dollars worth of fertility to it annually? if there is not, then the above miracle almost, may be wrought out. Take courage young men, try it! do not desert your honorable calling for wild, uncertain speculation; try it! stick to your calling, I say, and you will not repent of it.

BUCKS COUNTY.

Elements of Practical Agriculture.

DRAINING.

Principles to be ever kept in mind by the tillage farmer are to keep his land dry, rich and clean.—The first in the order of these principles, and an essential one to be regarded in cold and humid countries, is to keep the land dry.

While a certain portion of water is essential to vegetation, an excess of it may prove greatly injurious. In the colder countries an excess of water is one of the main causes of infertility, and a primary purpose of the husbandman there is to carry it away from the ground.

The water which falls from the atmosphere does not sink to an indefinite depth, nor generally to a great depth, in the earth. It is either retained at or near the surface where it falls, and whence it is evaporated, or it finds its way to a lower level, by channels upon the surface, or in chinks of rocks, or beds of gravel, sand, and other permeable substances beneath the surface.

When water stagnates at or near the surface, or when, having penetrated to pervious substances below the surface, it is finding its way to a lower level, the purpose of the drainer is to confine it to a determinate channel, and carry it away by some convenient outlet, in order that it may not overflow or saturate the soil.

The drains for conveying away water from the surface are:—The ditches of fields, which ought to be so laid out as to favor the descent of water, the open furrows which are formed by the ridges, and trenches dug in the places necessary for allowing a passage to the water.

The trenches for carrying away surface water, are usually left uncovered, and they are termed open drains. But sometimes they are partly filled with stones or other substances, and then covered with earth, so that while the surface water may sink down and be carried away, the tilling instruments may not be interrupted.

In the forming of open drains, the dimensions must be fixed with relation to the quantity of water to be carried away, and the direction determined by the natural flow of the water, or by the particular course by which it is expedient to conduct it from the ground. In general, open drains are formed in the hollows or lower parts of the land to be drained, so that the water may find access to

them from the higher grounds, or sometimes they are formed across the line of descent, in order to intercept the water which runs from the higher grounds to the lower.

In open drains, of whatever depth, the sides should possess a declivity from the top to the bottom, to prevent them from crumbling down and being underminded by the current. Except in the case of rock, this inclination should not be less than 45 degrees; and, when the earth is soft, and the flow of water considerable, it should exceed 45 degrees. In all cases, the earth should be spread from the edge of the trench backwards, so that the water from the land on each side may have access to it.

When drains of this class are covered, they are generally made from 2½ to 3 feet deep, and filled with stones or other loose materials to within a foot of the surface. They are usually in this case carried through hollow places, where the water of the land stagnates, or tends to flow.

The further end to be effected by draining is to form channels for water which has already sunk into the ground, and is either retained by it, or is finding its way beneath the surface from a higher to a lower level. It is the intercepting of water below the surface that constitutes the most difficult part of draining, and which requires the application of principles which it is not necessary to apply in the case of surface draining.

When the soil rests upon a retentive subsoil, the latter may present a surface of resistance to the water; or the water may have sunk down into the subsoil, and be finding its way through the channels beneath.

The substances through which water finds its way with facility are the looser earths, sands, and gravels, the crevices of rocks, and beds of loose or decomposing stones; the substances which resist its progress are clays and the harder rocks.

If we shall penetrate a little way into the looser portion of the earth, we shall generally find a series of strata, consisting of gravel, sand, or clay, of different degrees of density. These strata are frequently horizontal, frequently they follow nearly the inclination of the surface, and frequently they are broken and irregular. Sometimes the stratum is very thin, as a few inches in thickness, and sometimes it is several feet thick; and sometimes the traces of stratification disappear, and we find only, to a great depth, a large mass of clay or other homegeneous substances.

When these substances are of a clayey nature, water finds its way through them with difficulty; when they are of a looser texture, water percolates through them freely. These last, accordingly, form natural conduits or channels for the water which is below the surface, when finding its way from a higher to a lower level.

When any bed or stratum of this kind, in which water is percolating, crops out to the surface, the water which it contains will flow out and form a burst or spring, oozing over and saturating the ground, as in the following figure, whice represents a section of the ground, from C to D.

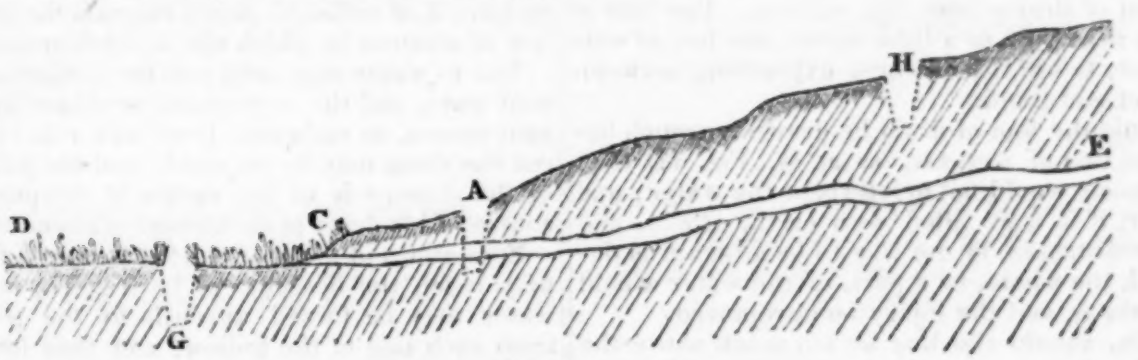

Fig. 44.

When water is, in like manner, percolating through one of these pervious strata, and meets any obstruction, as a rock or bed of clay at A, Fig. 44, it is stopped in its progress, and, by the pressure of the water from a higher source, it is forced upwards, and thus saturates the superjacent soil, as from D to E, forming springs, or a general oozing.

In either of these cases, and they are the most frequent that occur in practice, the object of the drainer is to reach the water in its subterraneous channel before it shall arrive at the surface, and to carry it away in a drain.

Fig. 45.

By cutting a drain at A, Fig. 44, the water of the stratum of sand CE, is cut off before it reaches the surface at C, where it forms the swamp CD.

In like manner, in Fig. 45, by forming a drain at C or F, the water is cut off in its channel AB, and thus, in relieving the pressure from the higher source, by giving egress to the water through the drain, the cause of the wetness from E to D is removed.

In looking at the sloping surface of any tract of ground, as a field, in which there is an oozing or bursting out of water, we shall generally distinguish the line where the wetness begins to appear on

the surface, extending over a considerable space, *xxxxx*, Fig. 46, the effects appearing in the wetness of the ground farther down the slope, as *yyy*. The line where the wetness begins, and which is generally rendered perceptible by the change of color of the soil, the tendency to produce subaquatic plants, and other indications of wetness, marks for the most part nearly the course which the line of the drain should follow. By cutting a drain nearly in this line as from G to A, and from L to A, sufficiently deep to reach the porous stratum in which the water percolates, we shall intercept it before it reaches the surface, and by carrying it away in some convenient outlet, AB, remove the cause of wetness.

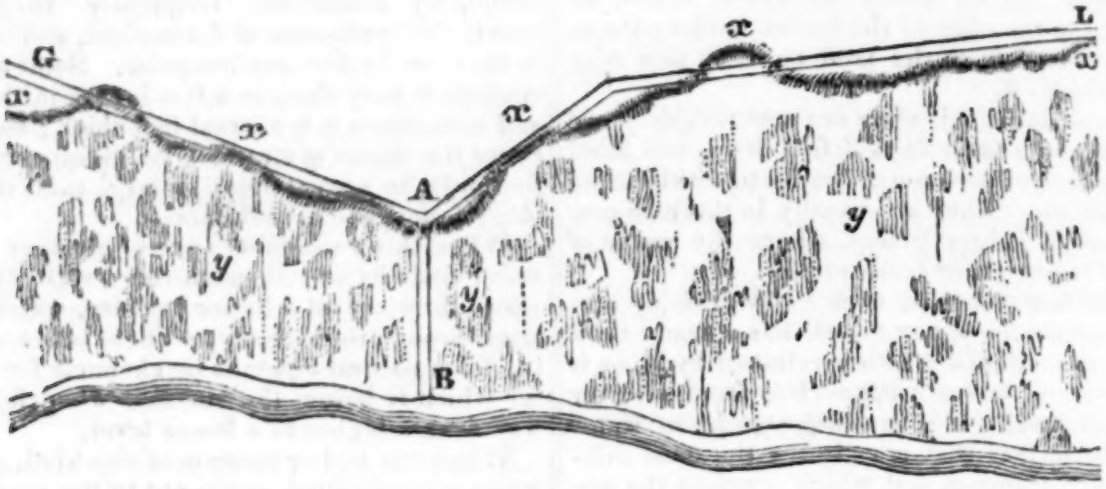

Fig. 46.

This, accordingly forms, in the greater number of cases, the rule adopted in practice for the laying out of drains upon the surface. The line is drawn nearly at, or a little above, the line of wetness, or, to use the common expression, between the wet and the dry.

Should the line of drain be drawn too much below the line of wetness, as at G, Fig. 44, then the trench would fail to intercept the water; and further, if it were filled with earth, stones, and other substances, in the way to be afterwards described, the whole, or a part, of the water would pass over it, and the injury be unremoved.

Again, should the line be too much above the line of wetness, as at H, the drain would fail to reach the channel of the water, and so would be useless.

It is for this reason that, in common practice, the rule is, to draw the line of the drain nearly between the wet and the dry, or a little above it, taking care to give it the necessary descent, and to form it of sufficient depth to reach the pervious bed or stratum in which the water is contained.

But as water may arrive at the surface in different ways, and the wetness be produced by different causes, so variations from this rule of lining out the drain may be required, and the judgment of the drainer is to be shown in adapting the course of his drain to the change of circumstances.

Sometimes in a hollow piece of ground, feeders may reach the descent, as in Fig. 47; and the water may be forced upwards by the pressure from each side of the hollow, and thus form the swamp from A to B. It may not be necessary here to cut a trench on each side along the line of wetness at A and B; a single trench C, cut in the hollow, and giving egress to the water, may relieve the pressure and remove the swamp.

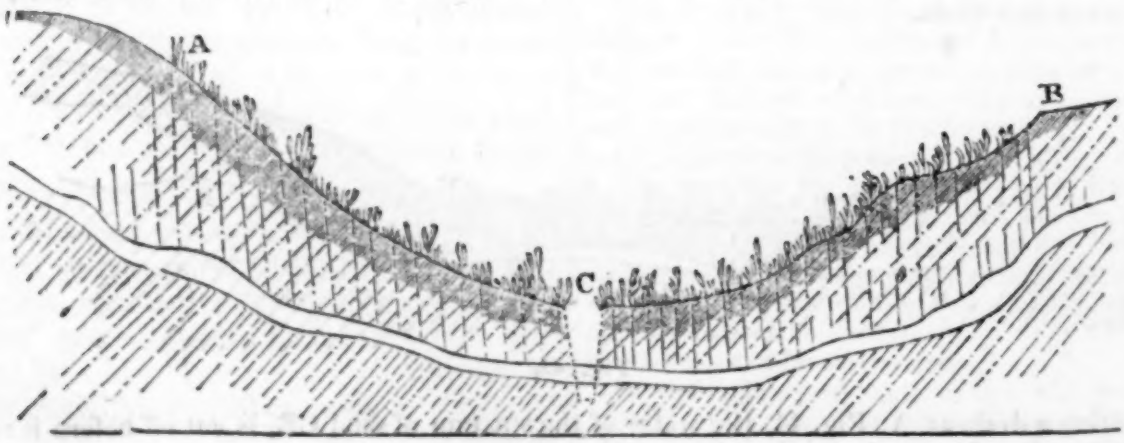

Fig. 47.

Sometimes upon a sloping surface, one pervious stratum, in which water percolates, may produce more than one line of springs, as at B and A, in the following figure. Here a single drain cut at B will remove the cause of wetness at both swamps, without the necessity of the drain at A.

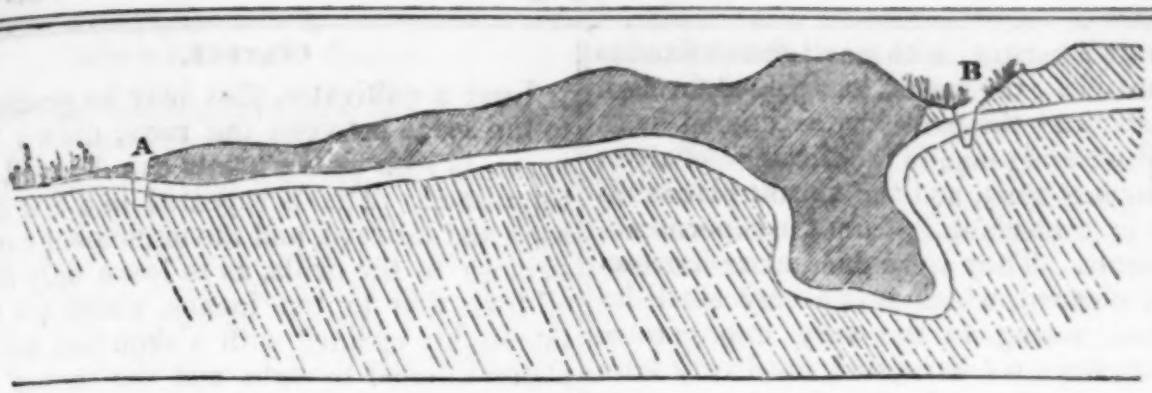

Fig. 48.

And, in practice, it is well to wait to mark the effects of a drain cut in the higher part of the slope to be drained, for these effects often extend further than might be anticipated, removing springs, bursts, or oozings, at a great distance.

On the other hand, a single swamp, as from B to A, in the following figure, may be produced, and yet one drain at B may be insufficient to remove it. In this case, the water being brought to the surface by more than one channel, it is necessary to form several drains to reach the several beds in which the water is contained, as at B, C, and D.

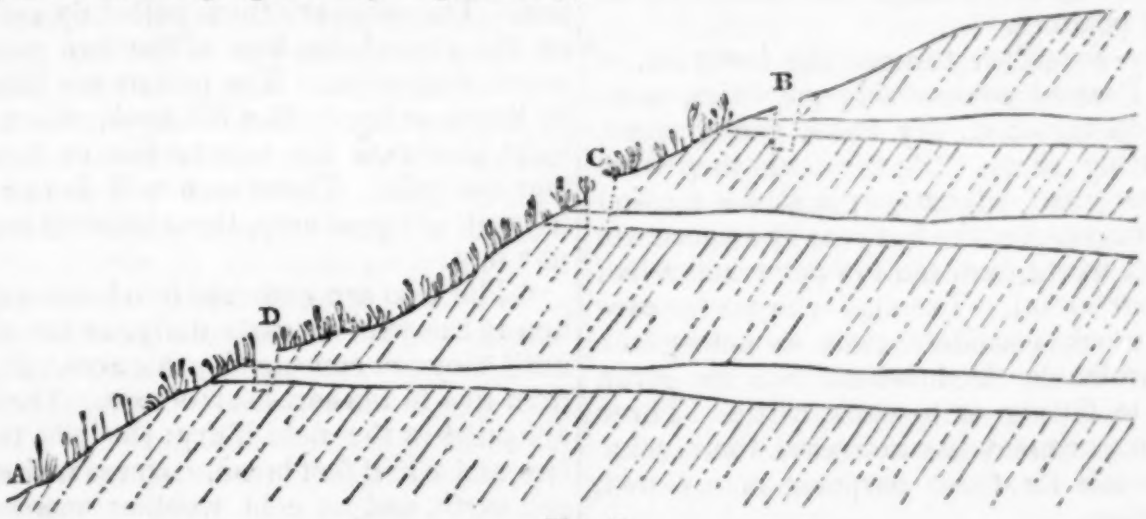

Fig. 49.

These examples will show, that one rule, with respect to the laying out of drains, is not applicable to all cases, but that the drainer should adapt his remedy as much as possible to the cause of injury. One end, however, to be aimed at in all cases, as to reach the bed, channel, or reservoir, in which the water is contained.

(To be continued.)

Rutabaga.

The following is an account of the method of cultivating rutabaga, adopted by the Rev. Henry Coleman, in obtaining a crop for which he received a premium of twenty dollars from the Massachusetts Agricultural Society, in the year 1830.

"Gentlemen—Accompanying this you have the certificates of a crop of rutabaga raised this year on my farm in Lynn. From these it will appear that on an acre, measured by a sworn surveyor, on one side of the field, were gathered seven hundred and forty-one basket-fulls; and that forty baskets of the above named weighed at the town scales, two thousand seven hundred and fifty pounds net weight.

"This, allowing fifty-six pounds to a bushel, the standard weight assumed by the society, would give a crop of nine hundred and three bushels to the acre. The turneps were planted on the 29th of June and second of July; about one pound and a half of seed was used for the acre; and they were gathered and stored in cellars and in the barn, in the last part of November.

"The ground on which they grew is a good soil, neither wet nor dry, and bore the last year an abundant crop of onions, and corn the year precceding the last. It was well manured at both times, and in fine tilth. It was manured with at least six cords to the acre of barn manure the last spring, and sowed again to onions; but the seed entirely failing, it was ploughed, harrowed, furrows struck out, and about eight cords of barn manure spread in the furrows; ploughed again so as by a back furrow to form a ridge over the manure, and the seed sown with a small drill harrow on the ridges, making the rows about twenty inches asunder.

"As soon as the plants were of sufficient

size, a drill harrow, with small shares fixed to it, to cut off all the weeds, was passed through the rows; and the plants were thinned with a small weeding hoe, to the distance of about eight inches apart, and the vacant places filled up by transplanting from the supernumerary plants. They were once more harrowed and cleaned, which was a very small labor; and owing to the very unpropitious weather, were not harvested until very late.

"Some of them were very large; one weighed fifteen pounds, and many were nearly as large. The exact expense of cultivating the acre cannot be estimated, as it was intermixed with other farm work; but the whole, from the sowing to the gathering, was not two thirds of the labor usually bestowed on planting, cultivating, and gathering an acre of potatoes.

"My Sweedish turneps the last year, of which I raised considerable quantities, were fed off to my oxen, dry cows, young stock, and fatting sheep. To the cattle they were of very great advantage; and for feeding sheep, they proved the last year by an accurate account, worth from ten to twelve and a half cents per bushel. The man who has the care of my stock considers them as among the most profitable feed which can be given either to fatting or to store cattle. Three years experiment has increased their value very much for these purposes in my own estimation.

A correspondent in the New England Farmer, Vol. xi., page 277, writes thus:—"A wish to have others profit by my experience has induced me to send you, Mr. Editor, half a sheet of remarks on the culture of the rutabaga as a food for domestic animals. I have cultivated from half an acre to three acres of this root every year for thirteen years in succession, and feel competent to give rules for its culture, and confidence in recommending it as a valuable and profitable crop.

"The soil must be rich and dry; and the more it inclines to a sand loam the better.—Clay is the worst, and wet soils will not answer at all.

PREPARATION.

My general practice has been, to manure well a piece of pasture, or clover ley, from which the hay has first been cut, plough it handsomely over, and harrow it well.

SOWING.

I sow in rows at two and a half or three feet, with a drill harrow. The sooner the preceding operations succeed each other the better. I have sown broadcast, but the expense of thinning and culture is increased. A man will drill in, three or four acres a day. We allow a pound of seed to the acre, though half this, properly distributed is enough.—Sow from the 26th of June, to the 10th of July.

CULTURE.

I use a cultivator, that may be graduated to the space between the rows, drawn by a horse, as soon as the plants can be well distinguished. This is repeated in a few days, back and forward, and the implement carried so close to the drills, as to leave only strips of from four to ten inches, which are then thoroughly cleaned with a skim hoe, and the plants thinned to eight and ten inches' distance. The cultivator soon follows for a third time, and if necessary, the skim hoe, when the crop is generally left till harvest. The great aim is to extirpate the weeds, and to do this while they are small.

HARVESTING

Is postponed as long as the season will permit. The roots are then pulled up and laid on the ground, the tops of the two rows towards each other. The pullers are followed by a man or boy with a bill hook, who with a light blow cuts the tops as fast as three or four can pull. Three men will in this way harvest, of a good crop, three hundred bushels in a day.

"The tops are gathered into heaps and taken to the yard in carts daily, or the stock, until they are consumed. An acre will give from five to ten cart loads of tops. The roots are piled in the field if dry; the pits, two or two and a half feet broad, covered with straw and earth, and as cold weather approaches, with manure, to prevent frost. N. B.—With a crowbar make one or more holes on the crown of the pit, which must be left open, to let off the rarified air, and prevent the roots from heating.

USE.

The tops serve for autumn. As soon as the mild weather of spring will justify, I break through the frost, and take the contents of a pit to my barn, and cover the roots with straw or hay. From thence they are fed to my stock, being first chopped up with a *snik*, (Dutch meat-chopper,) or spade. They are excellent for sheep, especially for ewes that have young; and hogs and horses eat them freely. Steamed, they are used in the north of England for horses as a substitute for grain.

"I have fattened sheep and bullocks upon them with profit. They constitute, particularly from February to June, an excellent culinary vegetable for the table. A bullock will thrive fast upon two bushels a day, and will consume hardly any hay, and requires no drink.

PRODUCT AND COST.

My average crop has been six hundred bushels per acre, though others have raised much heavier products. The cost in manure and labor, when they are secured for winter, has been from two to three cents per bushel."

For the Farmers' Cabinet.

Mischief and injury from the wanton destruction of birds.

The season having now arrived, that the little songsters make their appearance amongst us, to build their nests and rear their young, I appeal to every man, woman and child in the nation, to afford protection and security to them, in return for their most valuable services to us in the destruction of the myriads of insects and worms, that annually devastate our fields and gardens. It cannot but have been noticed by the most ignorant, that the various tribes of insects have increased in a geometrical proportion to the decrease of birds, who are their natural enemies; the equilibrium of nature has been destroyed by our cruelty and ignorance in refusing protection and succour to our best friends; and the annual loss sustained by it to the country, it would not be possible to estimate. During the past forty years the various tribes of small birds have been diminishing with a frightful rapidity, and if it should progress in the same proportion for forty years to come, it will be a serious question whether the produce of the country can be kept up, so as to supply the wants of the inhabitants. Where is the farmer that followed the plough fifty years ago, that does not remember the flocks of birds that crowded the furrows of the newly turned up earth, devouring every grub or worm that was exposed to the surface! They seemed fearless of man, each one appearing anxious to be nearest to the foot of the ploughman to destroy his inveterate and insidious enemies. Now what has become of those faithful guardians of our property? The answer to this question can be given by every farmer in the country without danger of mistake. As soon as they appear amongst us in the spring, and begin to build their nests, a set of idle, miscreant boys commence annoying them; take their eggs and often destroy their nests, and offer every kind of persecution to them which is in their power; and at all seasons of the year a set of ruthless vagabonds prowl through every neighbourhood with their guns, ever ready to shoot down a robin, sparrow, tomtit, or wren, either of which are rendering more service to the community in proportion to their ability, than their murderous persecutors. The damage sustained to grass and grain, the injury to fruit trees and destruction of fences by this worthless part of our population, is a matter of serious magnitude, but it sinks into comparative insignificance when contrasted with the increasing devastation by insects, mainly produced by the persecution and wanton destruction of the class of birds which were doubtless intended to keep their multiplication within harmless limits. The wheat, Indian corn, fruit trees, garden vegetables, and even the grass and the trees of our forests annually furnish the most conclusive testimony of the great disturbance in the equilibrium of nature, produced by these ignorant savages who can load and shoot a gun.—Public opinion, the influence of which is so potent in many other matters, ought speedily to be brought to bear on this very momentous subject. Where would exist the difficulty in calling public meetings in townships or neighborhoods to concentrate, and express public opinion on a subject in which every member of the community has so deep an interest! Let this speedily be done, and try its effect; if it should fail, other means must be resorted to, for the grievance is of too alarming a character to be tolerated longer in civilized society. Teachers of religion and school teachers ought to consider, whether they might not render some service to their fellow citizens by occasional instruction and admonition, that would illuminate the ignorant and alarm the vicious, in a matter that so deeply concerns the public welfare.

A premium of ten dollars, or a medal of equal value, at the option of the writer, will be paid to the person who will furnish the best essay on the foregoing subject, adapted for publication in the Farmer's Cabinet and the newspapers generally. The editor of the Cabinet who will pay the premium, to be the judge. The essay to be produced in time for the June number, and not to exceed four pages.

AGRICOLA.

Important to Farmers.

SPRING WHEAT—NEW CERTIFICATES.

Extracts of a letter from the Hon. Wm. H. Tilghman, dated Talbot county, Maryland, 11th Nov., 1837. "Coming near home, I saw Mr. Reybold, or rather the result of a committee of the Kent county Delaware, Agricultural Society, who have had the flour made of some of his Spring Wheat, and bread of the flower, which gave universal satisfaction, to a large and intelligent company present at a meeting (among whom were several celebrated millers.")

Mr. Reybold (President of the Delaware Agricultural Society,) has lately written to "Judge Buel," (conductor of the "Cultivator," printed at Albany, N. Y.,) saying that he got last winter of Mr. Hathaway, and sowed six bushels of the *Italian Spring Wheat*, that he merely ploughed up his stock field, as he does for oats and sowed it;—that he raised about thirty bushels to the acre, and it was his in-

tentions to sow all he had raised (120 bush.,) this spring.

Extract of a letter from Jay Hathaway, Esq. dated Rome, N. Y., February 19, 1838. "I have lately received a sample of *Italian Spring Wheat*, from the celebrated wheat growing county, of Cayuga,—it is very fine, and the grain is increased in size at least 1-4—it was raised by Levi Hopkins of Sennet. He bought six bushels last spring in Rome, sowed it on eight acres of rich sandy land, and had a splendid crop;—has threshed, measured and sold it,—he had 202 bushels from the five acres, and it *netted* him $65 to the acre, this is 40½ bushels per acre! Mr. H.—had 16 acres of winter wheat adjoining the Italian, and had less from it than 200 bushels. It was proven here, in Rome, the year past, that wheat sown *as late as 1st of June*, yielded 25 bushels to the acre!

The genuine Italian Spring Wheat, may be known, being *generally* of a reddish yellow.

The above wheat may be had (direct from Jay Hathaway, Rome, Oneida county N. Y.) by applying to John L. Peirce, Bull's Head, North Third street, Philada.

Philadelphia, March 18, 1838.

For the Farmers' Cabinet.

Be Kind to the Soil.

I was gratified with the publication of the remark made by Wm. West, the good old farmer of Delaware county, at page 250 of your last No., that

"HE LOVED TO SEE FARMERS KIND TO THE SOIL."

He did not die indebted to it, though he borrowed much from it, during the course of a long, well-spent life; but he annually returned as much or more than he borrowed, with interest; and in this way the benefits were reciprocal and always on the increase. Since his death, which took place in 1808, when he was in the 84 year of his age, the farm, which was a scource of so much pleasure and profit to him, and which was left in a high state of fertility, passed into the hands of those who appear to have been moved by a very different set of principles than those were which actuated the good, the kind, the intelligent, the industrious, the pious William West,* the great Pennsylvania farmer. For in common with numerous other farms in our country, it now appears, I am informed, as if it had been in charge of those, who are not only not kind to the soil as was Mr. West, but who attempt to get *something*, for *little* or *nothing*; those who are borrowing from it, without paying much either of principal or interest. This was not the plan of the patriarchal farmer of Delaware county, for he held it as a point of duty, "in every man who occupies land to endeavor as far as he is capable, to keep it in an improving state, for the benefit of himself, his connections, the public, and posterity; and he who can make an addition or improvement, though small, to what is already known, would be doing more good than giving alms all the days of his life."

His biographer says, "a visit to his farm was well repaid. The inquirer found always a hospitable reception, a pleasant companion; and saw every thing about the land bearing the strongest marks of industry, care and skill. The most luxuriant grass, the native production of the soil, every where met his eye; not a weed to be seen; the fences in the most perfect order, a compost bed ready prepared or in preparation in the field next to be dressed, and every improvement effected in the most substantial manner, as if he had been just entering the farm early in life." "He made ample pecuniary loans, without the smallest compensation. Against this he was principled. He had known the advantage himself of some capital in the commencement of his agricultural operations, and therefore, freely advanced it, when convenient, to those proper objects whose necessities induced an application to him." It was his firm settled conviction that a farmer could not make a more secure and profitable investment of capital than by the most liberal expenditure of it, in increasing the fertility of his farm, so as to cause it to produce the greatest quantity of grass; and, this accomplished, all the rest was easy, pleasant and profitable.

This has now become the settled conviction of the most intelligent and successful farmers in our country, and any attempt to controvert it is considered little short of heresy in agriculture.

Now let us all resolve hereafter to amend our ways, and make reparation for our long continued disobedience to the sound advice of the wise and good, and in time to come, remember to

"Be kind to the soil."

Springfield.

March 26th, 1838.

* Eldest brother of Benjamin West the celebrated painter.

For the Farmers' Cabinet.

Rats.

Mr. Cabinet:—I suppose I need not tell you that *rats are an abominable nuisance*, that they do a vast deal of mischief, and that they exist in vast numbers about many of our barns, corn-cribs, and granaries. I have no doubt that many farmers lose as much by them in a year, as would hire a good hand during the whole summer. Now what I want is that some of your ingenious correspondents would inform us through your paper, how to get rid of them.

Chester County, March 21, 1838.

The following communication from Col. KENSINGTON SMITH, Secretary of the Agricultural Society, is worthy attentive consideration. The plan recommended is simple, and no doubt efficacious; and if generally adopted, in sections where coal ashes may be easily obtained, the best results may be anticipated. The great value of coal ashes has been almost entirely overlooked.—We are promised an article on this subject by a gentleman who is acquainted with the value of it, and who has applied it to his land with the best effect.

To the Editor of the Farmers' Cabinet.

Peach Trees.

About this time last year, I sent to the editor of the Germantown Telegraph, a communication, which was published over the signature of PENN, recommending the use of COAL ASHES AS A MANURE FOR PEACH TREES. Another year has rolled around, and I still have no reason to doubt their efficacy. The result of my observation has confirmed the opinions I advanced in my communication of last year. I have found very few worms, although many of my trees are in a garden, and the earth round about them, is more or less mixed with the ashes in its cultivation. Most of those I found were above the ground, and their presence was indicated by an oozing of gum, accompanied with the woody-borings thrown out by the worm. By looking for these their presence is easily indicated. My trees during the last year have made a great quantity of wood, and have been remarkably healthy. They have this spring an appearance of vigor, that seems to justify me in expecting a large crop. My confidence in the advantage of the use of coal-ashes is now fully established, both for peach, apple, plum, and apricot trees. I open a hole around the root extending to about the distance of a foot from the stem, then after having carefully examined to ascertain that there are no worms, I fill up the hole with ashes, and raise it about four or six inches above the level of the adjacent earth. I find the ashes after being wet adheres very closely to the stem, and holds the tree firmly in its position. The ley therefrom, whether it proceeds from the lignious or mineral ashes, (for there are usually both in the coal-ashes, to say nothing of the theory that mineral coal is a vegetable deposite) certainly acts as a powerful promoter of the rapid growth and vigorous and healthful appearance of the tree, and in bearing seasons insures an abundant crop of fruit, and that too upon a soil in which the cultivation of the peach tree has been almost abandoned for thirty years past. This delicious fruit, can now I think be cultivated in the county of Philadelphia, with complete success, if care is taken to have the trees examined twice in the fall, between the 1st of September and December, and once in the spring, a labor which is soon performed, as the presence of a worm is so easily detected when ashes are used, and the worms are seldom found below the surface of the ashes.

SUGAR BEET WITH CORN.

A friend has mentioned a plan of growing beet roots that has been adopted by a distinguished farmer in Chester Co. Pa., which is said to have been very successful.—They are grown in alternate rows with corn; the corn being planted in rows six feet apart, a row of beets intervenes—the corn crop is very little if it all diminished—the labor is not much increased, and a very good crop of beets is obtained; the shade of the corn is supposed to be favorable to the beet. This plan may be worthy of a trial by those who have not prepared a piece of ground for roots, and who are anxious to have good winter food for their cattle.—*Baltimore Farmer.*

EZEKIEL RHOADS, states—That within one week after his sugar beets were exhausted, the butter from three cows was reduced from twenty to fourteen lbs. per week. His butter was in much higher repute while feeding on the sugar beet, than it had ever before been during winter.

To the Editor of the Farmers' Cabinet.

Canada Thistle.

DEAR SIR,—In looking over the March number of the Farmers' Cabinet, I took notice of an article headed, "Canada Thistle," setting forth the nature, the pernicious effects and unfortunate introduction of that most pernicious weed into the state of Pennsylvania. Unfortunately, some years back, I sowed one of my fields with timothy seed, said to have been brought from the state of New-York. About three years after, I observed one large parent stock, with several of a smaller growth, of the Canada Thistle, the first I ever saw of that species. My mind immediately recurred to a conversation I had with a neighbor some months previous to this period of time, relative to this kind of thistle, introduced in a similar way upon his farm. I immediately took one of my men with a spade and bucket, and had the whole of the ground occupied by the thistle spaded from one foot to eighteen inches deep, and a diligent search made for every root and fibre thereof, being determined to eradicate it at once. About two years after this (which was last season) on examining the spot where the thistle was first found, I think there was double the former number of them spread and growing on more than double the space of land, so amazingly had they multiplied,

notwithstanding my former care. This second crop was mostly young, and might be owing partly to the seed from the parent stock, for it was a seed stock when nrst taken notice of, as well as from some of the remaining roots and fibres of roots, though there were none left in the ground to my knowledge. I now directed a similar operation for the second removal of them, and if not successful, I intend to adopt the method recommended in the enclosed slip from a Bucks County paper, the republication of which, in the Farmers' Cabinet, may be a good answer to an inquirer for information upon this subject, and an advantage to the farmer who is troubled with this thistle. The writer's description of the plant is certainly a good one. Yours, &c.

JAMES ANDERSON.

Lower Merion, Montgomery Co.
March 19th, 1838.

From the Bucks County Intelligencer.

Canada Thistle.

There are a great variety of Thistles, some are annual—some biennial and some perennial. The two first kinds may be easily destroyed by cutting them down with hoes or mowing before the seed ripens, they are but very little in the way of the farmer, do but little injury to the land and generally looked upon as an evidence of the goodness of the soil.—But those that are perennial are very difficult to extirpate and cannot be destroyed but by a total eradication of the root with all its fibres or by destroying them in the ground. The Canada Thistle is a perennial plant, strikes its root deep into the ground from one to two feet in one single stem with joints one or two inches apart from which small fibres shoot out—from three joints there will spring up new tops if the upper part is cut off or the root broken and any of the joints left in the ground—when it grows with grain or tall grass such as Timothy, in a good soil, it throws up generally one stalk from 18 to 20 inches high on the top of which it has a head like the common thistle but smaller and with smaller seeds of the same shape and color, with a down attached to the end of which the wind carries the seed and spreads it abroad—where it grows by the road side or in pasture fields it branches and spreads out a bushy top, the leaves smaller and more numerous than the common Thistle and every leaf is covered with small and very sharp spikes, like needles.

Some years ago I discovered the Canada Thistle on my farm among the Oats; when cutting it the seed was ripe and most of it blown away from the head, the next year the field was laid down in grass, the Thistle came up very thick, I concluded to destroy it if possible. I had the gronnd dug up 12 inches deep about a rod square where it grew the thickest: all the roots gathered out that could be found and burned. After lying a few weeks, the Thsitles came up very thick from the joints of the broken roots that were left in the ground—I then had about two barrels of fish pickle and three bushels of salt put on well mixed with the ground, all this did not destroy the Thistle it came up from the broken roots that were still left in the ground and grew, but appeared weak and unthrifty—as we did not dig up the whole ground containing Thistle I adopted another experiment to destroy it. My farmer took a grubbing hoe and stuck it into the ground about three inches from the plant so as to bring up the plant and part of the root with the sod, then put a handfull of coarse salt into the hole, took the root out of the sod and returned the sod to its place,—in no instance did the root shoot up again, but perished where it was cut off at or near the centre of the hole, the salt gradually dissolving for months, completely destroyed it.—The seed being spread by the wind over a considerable space of ground, the Thistle continued coming up every summer for three years, and as often as new plants came up they were dug up and salted, by which means the Thistle was totally eradicated. This appears to be a tedious and and protractive mode of destroying it, but it is effectual, and one man can destroy a great many plants in a day. The Thistle has been brought from the State of New York into this country by sheep the seed getting mixed in the wool is carried by them and scattered over the country, it is also brought in Timothy seed.

BUCKS COUNTY.

For the Farmers' Cabinet,

Manures.

Manures are of three kinds, *vegetable*, *animal*, and *mineral*, and a *compost* made of either or all of these intimately combined, by *industry* and *intelligence* will make grass grow most luxuriantly; and when that is accomplished no farmer need apply to the doctor to know what to do next. His collapsed purse will soon begin todistend itself and to stand up stiffly. But I was going to state that a considerable diversity of principle and practice prevails in regard to the best mode of applying manures of different kinds, and that difference is most considerable in regard to the application of the mineral manures; particularly lime and marl, or more appropriately the green sand of New Jersey, Delaware and Maryland. As respects plaster of Paris, it is universally admitted that it ought to be applied as a top-dressing to grass or clover; when the rains dissolve portions of it and carry the solution down to the absorbing

fibres of the roots, whence it enters into the composition of the plant, for which it furnishes a wholesome invigorating nutriment. There scarcely remains a doubt, but that the same mode of application by top-dressing is also the best mode of applying the green sand, or marl, as it is sometimes called; but of this it would be well for observing farmers, who have used it extensively to furnish the results of their observations and experiments, for the benefit of the craft generally. Chemists say that good green sand or marl, on analysis furnishes from 7 to 14 per cent. of pot-ash, and it is now generally believed that this is the ingredient on which its fertilizing property exclusively depends; for it is found to be more or less useful in promoting vegetation in proportion as the pot-ash predominates in its composition. I am informed that in the process of analysis, by which the quantity of potash is determined, they first separate by mechanical means, the silicious matter or common sand from the particles of the green sand or marl, and then subject the latter *only* to the process of chemical analysis, and it is by this means that the percentage above stated has been obtained. Of course that which has the least common sand mixed with it, is to be preferred, although it might indicate only the same percentage of pot-ash with that containing more silicious matter. The farmers on the peninsula between the Delaware and Chesapeake bays, where this most valuable article has recently been found to exist in great abundance, are very desirous of being informed through the Cabinet from some of our experienced Jersey agriculturalists, the proper mode of using this newly discovered scource of wealth, to the greatest advantage, and it is to be desired that your next number will oblige them in this respect.

As regards the application of lime, various modes have been resorted to. Some spread it on their Indian corn ground in the spring, and work it in by dressing the corn, from a supposition that ploughing it in, and mixing it well with the soil is an advantage. Others apply it on an open fallow in the summer or fall, preparatory to sowing their winter grain; of course it is by this process well ploughed in and for the same reason, as is adduced for dressing the Indian corn ground with it. Others again spread it on the grass or sward, either in the fall or spring, and this plan of operation is now believed by many to be preferable to either of the other modes of application. Because it is found in regard to all the mineral manures, that their specific gravity being great, they sink into the earth quite as soon as is desirable: lime spread on the sod, in the course of a year will generally be found to have sunk several inches in depth, and then the plough will bring it near the surface again, where its action is most beneficial in decomposing the vegetable fibre, and by this means furnishing a soluble material for plants to feed upon; and at the same time it loosens the soil, by releasing the clods of earth which are often held together by the fine fibres of the roots of the grasses, particularly timothy, the roots of which are very strong and rigid. There is no danger to be apprehended from evaporation in the case of any mineral manure, and some entertain the same opinion in regard to vegetable; but this is a mooted point, and will require further observation before it can be pronounced upon with safety; for if manure of any kind be placed in a vessel over a moderate fire, the only thing that will be found to arise from it will be pure or distilled water, entirely free from any contamination. So that there does not appear to be any danger from manure rising out of the earth, but there may be danger of its sinking too deep for the roots of plants to follow it. Hence I conclude it ought to be our effort to keep it as near the surface as possible, and depend upon the rain to disolve it, and carry it to the absorbing fibres of the roots of plants. These remarks are made to elicit the views of the experienced in these matters that we may arrive at the true theory of the application of manures.

AGRICOLA.

March 28th, 1838.

For the Farmers' Cabinet.

Receipt for making Boys industrious and useful.

He who is not fond of his calling seldom succeeds.

It cannot but have been remarked that the natural disposition of children when in health is that of great bodily activity, and the predominant efforts of those, to whose care they are intrusted, is often to diminish this disposition, so as to be productive of the least possible inconvenience to themselves. This I take to be a great error in education, and one of the principal causes which gives rise to indolence of character, at a more advanced period of life; when we are desirous of deriving the most advantage from their labor. The muscular powers become strengthened exactly in proportion as they are brought into use; and if we want strength, we must use it, not abuse it. Let children be permitted to exert themselves, and be as useful as their circumstances admit of, and furnish them with implements or tools adapted to their age, strength and capacity, from time to time, and give them the soothing language of encouragement to use them, and they will grow up from childhood to man's estate without being chargeable with the crime of being lazy; and it will be found that a vast amount of useful labor may be extracted from them without

murmuring or repining; their bodily powers will be improved and invigorated, and they will display more mental developement than those with whom a contrary plan has been pursued. Farmers should procure for their boys, small axes, shovels, forks, dung-forks, rakes, spades, wheelbarrows, scythes, sickles, and in fact every tool necessary for the performance of every agricultural or horticultural operation. These should all be graduated in weight and size to adapt them to the age and strength of their juvenile owner; for they should be possessed in fee-simple by the boy for whose use they are intended, and that would be a complete guarantee not only that they would be used with effect at the proper season of business, but that in the intermediate periods, when not wanted, they would be properly respected and cared for; and the approach of the time anticipated, with much pleasure, when they could be brought into profitable requisition. If those who make tools would prepare setts of the different kinds made for mens' use, graduated to the proper proportions for lads, and let them be of a good quality so as really to be useful, and not toys, they would meet with ready sale, and the expense to the purchaser would be small, compared with the benefits derived from them. When a boy grew out of them, although he would be the owner, he would readily convey his title to the next in succession, so that a single sett might serve several in turn, as a pair of pantaloons or a vest descends to the next expectant in a provident family. If this plan was carried out by an intelligent father, who would give himself the exquisite pleasure of conversing rationally with his young sons, about the reasons of the various plans and processes of agriculture, and take some pains to get them to understand the philosophy of his calling, he would rarely find them indolent or dissatisfied with their business, and less seldom would he discover a disposition to exchange so useful and honorable an occupation, for the more precarious and hazardous business of mercantile life. W.

For the Farmers' Cabinet.

Blight in Pear Trees.

The cause of the blight in pear trees has frequently been a subject of inquiry. I believe it most commonly attacks trees standing in well cultivated and rich soils. In this I apprehend lies the first cause of the disease. I have found from the observations that I have made during the last four years, that every tree which bore large quantities of fruit was more or less blighted, while other trees of the same kind of fruit, of the same age, and standing in the same ground, but moderate bearers, were not affected by this disease. Last year I observed that a tree of the pound pear kind, had one of its largest branches so completely filled with fruit that three props were placed under it to prevent its breaking down; a few days afterwards I examined this tree and found that identical branch blighted. The leaves appeared to have been burnt, and the bark was decayed and dried up. I examined another tree in the same orchard having a single branch blighted, which last year was overloaded with fruit. The other branches were in a vigorous state. The reason I conceive why pear trees are more subject to blight in a well cultivated and rich soil is, that they are forced to a higher state of vigor than trees standing on a poor soil or grass land. After a year or two of rich culture they become exceedingly vigorous, make a great proportion of wood, and form numerous fruit spurs; and then a favorable year occuring, they are overloaded with fruit. The maturity of this great quantity of fruit checks the growth of the tree, exhausts it, and destroys the vegetative principles. If overbearing be the cause of the fire blight, the obvious preventive is to thin off the fruit, wherever it shall appear to be too much for the tree to bear.

A. B.

Lampiter Square, Lancaster County.

For the Farmers' Cabinet.

Fencing and Whitewashing.

Spring having now arrived, it is time for the whole brotherhood of farmers to be up and doing. One of the first things to engage attention is our fences; let us have them all well mended; and if necessary reset, and if there are any new ones to be made, now is the time to have it done, before other indispensable farm operations engage our care and attention. In renewing fences, a removal of them, so as to bring the soil under cultivation where a fence has long stood is a great advantage, as it enables you to clean the ground of weeds, briers and sprouts of various kinds, and it oftentimes furnishes a fine spot for a compost heap, handy to where it is wanted. In many parts of our country, where stone is abundant and easily and cheaply procured, I am satisfied we ought to turn our attention more to making *stone fences;* timber having become so scarce and expensive in many places that keeping up our fences, to adapt the enclosures to our our present mode of farming, is a very serious affair. Some persons who have tried stone fence have not been very successful with it, in consequence of not having it well put up. In order to secure it from falling down, more attention should be given to in-

part strength to it, than to improve its beauty at the expense of its stability: and in order to accomplish this, at least one-third of the stone should be laid across the wall to bind it together properly; whereas the more common plan is to lay them, generally, lengthwise, to make a handsome facing on each side. This is the most material and principal matter to be attended to in building a stone fence. Some are of the opinion that it is better to build upon the surface of a sod, than to dig a foundation, unless you extend it entirely beneath the reach of frost. Those that extend north and south stand better than those which run east and west, because the frost thaws out of the ground on both sides about the same time and it settles equally; but in the other direction the frost on the south side is gone long before that on the north is operated upon by the sun, consequently it settles unequally and is liable to be leaned over and injured, unless it is well bound together by cross-ties. Those who wish to try this mode of fencing might begin by making those north and south; as with them they would be likely to be most successful; and by the time they have finished all in that direction they will have acquired experience, which will enable them to go east and west with safety. The indefatigable Samuel Mason, of Roxborough, on the township line road, about seven miles north of the city of Philadelphia, has made a considerable extent of stone fence within the last ten years on his place, with the aid of his common hired help only, and it is done in a handsome, workmanlike manner, and looks as if it might stand for generations to come with very little care. Let this important subject engage the attention of those who have the material handy, perhaps in their fields, where it interferes with the plough.

Whitewash all the fences about your house, barn and garden, and your out-houses, that are wood and are not painted; it preserves the timber to a much greater amount of value, than the labor and expense of doing it; and then you have all the advantage from the neatness and improved appearance of your premises gratis, and that I think no person will doubt is worth having for nothing, for that is certainly the absolute cost of it. I am fully aware that some people, whose moral standing is not very elevated, seldom attend to those little matters of neatness, as they often call them, but those of a different cast consider them as involving a principle of some importance; for I once heard a celebrated preacher of acknowledged piety and great experience say, that "Cleanliness was near a kin to Godliness."

After the feeding season is over, clean out your barn, stables and cellars thoroughly, and give them all a complete white washing, it will much improve their appearance and destroy the insects which harbor and propagate their species in places that the whitewasher don't intrude upon with his brushes and lime; some think whitewashing an excellent way of getting the weevil, which is so destructive to wheat, dislodged from a barn—it is certainly worth a trial. WISSAHICON.

March 28, 1838.

For the Farmers' Cabinet.

Birds, Moles and Toads.

The evil tongue of slander is ever busy in finding fault and deprecating the character and standing for usefulness, of those, of whom they know but little, perhaps nothing. So it is with the public generally, and with many farmers in particular, in respect to the character, habit and instinct for usefulness of many birds, reptiles, insects and some animals, the true character of which has not been carefully investigated, except by naturalists who have devoted much time and laborious research to the more obscure and difficult branches of natural history.

Many kinds of birds have been supposed by the great mass of the people, to be useless or mischievous, or at best to be only valuable for the purpose of instructing young urchins or older dunces how to shoot with precision and effect. But this, in regard to many kinds of birds, it is believed, is now on the way of being settled, for those who refused to be operated upon by argument or remonstrance, have been, and are likely still further to be influenced, not by the voice of humanity or benevolence, but by the more powerful influence of interest or the love of gain. The prodigious multiplication of destructive insects, since the progressive and great diminution of birds in the more densely settled parts of our country, begins to call up reflection, and seriously to alarm the great mass of agriculturists throughout the Atlantic states, where the great evil of this destruction of the equilibrium of nature, and the palpable interference of man with its antagonist principles, are at present most seriously felt. But my object, in the present communication, is not to discuss particularly the uses of birds in the economy of nature, but to call attention to the character, habits and usefulness of the *mole* and the *toad*; two animals which have been assailed without much mercy or compassion for ages and generations; and in the almost total absence of defence, judgment has been rendered against them by default, and they considered by the multitude as mischievous depredators or offensive outcasts; and as a matter of course, every ignorant or prejudiced person in whose presence they make their appear-

ance deals out destruction and death to them without reflection or compunction of conscience.

The mole, as is well known burrows in the ground, and forms lanes in various directions in search of its favorite food; which is not, as has been generally supposed the roots of grass and vegetables; for the only food they can be subsisted on is animal. The late much lamented Dr. Godman in his most instructive and interesting work on natural history says (and this is confirmed by other naturalists) that "the favorite food of the mole is the earth worm; grubs and insects of various kinds he destroys in great quantities, and it may fairly be questioned whether the good done in this way does not more than overbalance any evil attendant on his presence. The presence of the mole in fields of Indian corn appears to be decidedly advantageous from the destruction of great numbers of slugs and worms; but in dry seasons these animals, if numerous, may injure small grain or grasses to a considerable extent, not only by the wounds they inflict on the roots with their sharp claws, but by raising the sod while forming their burrows, so as to withdraw the roots from the moist soil below."

It does not appear, after a very critical examination of the history of the toad; and after a particular inquiry into its domestic habits, that it has ever been charged with any particular crime against the lords of creation or any infringement on his rights or interest; but he is said to be ugly; this at best is a mere matter of opinion in which there may exist an honest difference of judgment or taste, but it ought not to excite prejudice to his injury. The slanderer has said he was poisonous; but this is clearly a mistake, for birds of prey and snakes swallow them with impunity, and some authors say that they are equally as delicious a morsel as the much esteemed bull-frog; how this may be I shall not determine; I merely contend that they are innocent and harmless, and are therefore entitled to our protection, and even to our regard if they are found to be concerned in the protection of our best interests, by destroying vast multitudes of voracious insects and worms on which they exclusively feed. The enlightened gardeners of Europe, accumulate large numbers of them in their gardens and green houses, to aid in protecting their precious plants from the depredations of insects, which they effect with great skill and dexterity. Why should not then our farmers and gardeners be equally solicitous to avail themselves of the valuable services of friends who require no further remuneration for the good they do us, than exemption from destruction and death.

It is stated in Pennant's Zoology "that a Mr. Arscott of Tehott in Devonshire, had a toad, which lived in a kind of domesticated state for more than forty years, and of having been in a great degree tamed, or reclaimed from its natural shyness or desire of concealment; since it would always regularly come out of its hole at the approach of its master in order to be fed. It grew to a very large size, and was considered as so singular a curiosity, that even ladies, laying aside their usual aversion and prejudices, requested to see the favourite toad. It was therefore often brought to table, and fed with various insects, which it seized with great celerity, without seeming to be embarrassed by the presence of company. This extraordinary animal generally resided beneath the steps of the house door, fronting the garden, and might probably have survived many years longer, had it not been severely wounded by a raven, which seized it before it could take refuge in its hole; and notwithstanding it was liberated from its captor, it never again enjoyed its usual health, though it continued to live above a year after the accident happened."

While writing the first part of this communication a distressed father called on me in great agitation, to procure aid and assistance for his son; a lad of 16 years of age, who had a few hours previous been so seriously injured in his elbow joint by the discharge of a gun, when he was out shooting birds, that the use of his arm was supposed to be permanently lost. I insert this incident as a commentary on the text, and bid you good speed in your valuable editorial labors of the Farmers' Cabinet.

Philadelphia County.

March 28th, 1838.

For the Farmers' Cabinet.

SONNET AND ACROSTIC.

"Speed the Plough."

Spring, balmy Spring! returns with smiling face,
Princess of seasons!—See, th' industrious plough
Emerges from its winter covering now,
Enters earth's yielding breast—leaves there its trace
Deep in the soil—and onward moves a pace!
There is the plough-boy! mark the ruddy glow
Hastes to his cheek, as with a joyous brow,
Eager once more, he takes his wonted place.—
Pastures again the lowing herds invite,
Luxuriant, in the green of Spring arrayed;
Orchards are blossoming, and landscapes bright
Unveil to view, thro' valley, hill and glade!
Gladsome is earth!—nor should aught else, be sad;
Haste then the plough!—and bid the heart be glad.

E. C. S.

Cedar Brook, Plainfield, N. J.

Products and profits of Land in Kent County, Del.

Having often heard from others, of the great profit made by our neighbor, Jonathan Jenkins of Camden, from the cultivation of a few acres of land, which a short time since was of inferior quality; I finally determined to ascertain from himself, the truth of the statements above alluded to. He informed me that he began to improve the soil of this small tract of land, containing only thirty-eight acres. It was very poor—more so than most of the lands in the neighborhood of Camden, and not better than much which is now suffered to lie waste in our country.—That from the very beginning it paid him a good profit, for the money expended in the purchase, and all the manure and labor bestowed upon it, although some of it, in consequence of its immediate vicinity to Camden, cost him sixty-five dollars per acre.—That his crops kept every year increasing in quantity, quality, and value, until he was induced to keep an account of them, and of the sums realized from the sales of his various crops, as well as the expense of culture. The following is a statement made in his own hand writing, and handed to me with the liberty of making it public, for the encouragement of others, who own light worn-out lands in our State.

Products of JONATHAN JENKINS' model farm contains thirty-eight acres, and divided into five fields, for the year 1837.

250 bushels oats, at 50 cents,	$125 00
150 bushels winter wheat red bearded at $2,	300 00
46 bushels spring wheat at $3,	138 00
325 bushels Pennsylvania yellow flint corn, at $1,	325 00
35 tons Clover Hay, at $12,	420 00
15 tons wheat and oat straw, got out with wheat threshing machine, worth per ton $8,	120 00
Corn stalks, top and blade fodder, all cut off by the ground and saved in good order, worth say	75 00
140 bushels Irish potatoes at 50 cts.	70 00
15 bushels sweet potatoes at 60 cts.	9 00
40 bushels turnips at 15 cts.	6 00
Pasturage for 4 cows, 8 months at $2 per month,	64 00
Profit or advantage from Pasture in fattening 1000 lbs of beef, over and above the pasturage of cows as stated,	40 00
	$1692 00
Deduct for expenses of cultivation and saving crops allowance, say	320 00
Nett profit,	$1372 00

He says that some persons may probably think his estimate of prices too high; but that he has always sold most of the produce for the sums there given, and expects to dispose of the remainder at the rates there set down; and at all events, making every allowance for excess in the estimate of the value of this little farm, these thirty-eight acres were worth to him the last year, a *sum equivolent to the interest on twenty thousand dollars.*—*Delaware Register.*

For the Farmers' Cabinet.

Blight of Pear Trees, and Decline of Old Varieties.

Various as are the opinions entertained respecting the cause of the blight in pear trees, it is well known that many old varieties are particularly obnoxious to the disease or injury. It is also generally known that many old varieties of pears and other kinds of fruit, have become greatly deteriorated—some so much so as to be worthless. These are facts, which, we presume, will not be called in question, however, widely horticulturalists may differ in regard to the cause and mode of the decay.

It becomes, then, an important object to obtain new varieties of the several kinds of fruit, and especially of pears. In Europe, several eminent amateurs in fruit have devoted much time and labor to the propagation of pears from seeds, and amongst the most successful may be mentioned Dr. Van Mons, of Louvain in Belgium. Many people are deterred from attempting to raise new varieties from seed by the long time that must elapse between the planting of the seed and the bearing of the trees, and the probability of having nothing but worthless fruit in the end. This difficulty is, in a great degree, obviated by the mode Dr. Van Mons has adopted, which is this;—selecting seedlings of a suitable size,—perhaps one or two years old—which are furnished with many buds or eyes placed near together, he grafts them, if apple, on paradise stocks, and if pear, on large pear or quince stocks, and thus in two or three years after grafting, fruit is produced. If the fruit is not good, he plants the seed of it and repeats the process until he obtains fruit of excellent qualities; and by this means he has greatly enriched our stock of pears, having propagated several hundred varities.

To these the attention of all who are fond of good pears, or who wish to raise them for the market should be directed, not only on account of the superiority of many of them in point of quality, but because there is a great probability that the *trees* will be less liable to *blight*, and that the *fruit* will retain its good qualities.

[Many of these kinds have been imported and proved in this country, and may be obtained at the nursery of Samuel Rhoads, Jr. in Haddington, 4 or 5 miles west of Phila-

delphia, (Office 258 Market street.) There is a large collection, and many of the trees are of large sizes and his prices moderate. We understand he has visited the principal nurseries in Great Britain, France, and Belgium, and personally selected the best kinds, where the greatest dependence could be placed on the nurserymen. Enterprise of this kind deserves and we hope will receive encouragement.]

For the Farmer's Cabinet.

Things that I have seen.

I have seen a farmer build a house so large and fine that the sheriff turned him out of doors.

I have seen a young man sell a good farm, turn merchant, break, and die in an insane hospital.

I have seen a farmer travel about so much, that there was nothing at home worth looking after.

I have seen a rich man's son begin where his father left off, and end where his father began—pennyless.

I have seen a worthy farmer's son, idle away years of the prime of life in dissipation, and end his career in a poor house.

I have seen the disobedience of a son, "bring down the gray hairs of his father with sorrow to the grave."

I have seen a fine girl marry a young man of dissolute habits, and repent of it as long as she lived.

I have seen the extravagance and folly of children, bring their parents to poverty and want, and themselves into disgrace.

I have seen a prudent, industrious wife, retrieve the fortunes of a family, when her husband pulled at the other end of the rope.

I have seen a young man who despised the counsel of the wise and the advice of the good, end his career in poverty and wretchedness.

I have seen a farmer too self conceited to amend his ways, and too proud to retrace his footsteps.

I have seen poor boys grow rich by industry and good management, and rich boys become poor by idleness and dissipation.

I have seen a man spend more in folly, than would support his family in comfort and independence.

I have seen a person depart from the truth, when candor and veracity would have served him a much better purpose.

I have seen a man deliver a fine political oration on a fourth of July, when his cattle were foraging in his grain field.

I have seen a young man soil his reputation by a departure from principle, when all the waters of the Delaware would'nt wash it out.

I have seen a man engage in a law suit about a trifling affair, that cost him more in the end, than would have roofed all the buildings on his farm.

I have seen money spent in litigation, that ought to have been applied to manuring a farm.

I have seen a man work by his wits instead of his hands, till his farm was grown up with bushes and briers.

I have seen a person neglect to repair or renew his fences, till he had lost enough to buy three cows, and had to do it at last.

'76.

For the Farmers' Cabinet.

Flax Seed.

Observing in the last Cabinet some statements respecting the advantages resulting from the feeding of flax-seed to stock, my attention was directed to an opinion entertained by many persons respecting it. It is supposed that when administered to animals under certain circumstances, whether in the form of whole seed or oil, to produce abortion. My own experience is very limited; but I have seen two instances which appeared to justify the opinion. If this be a fact, it is well worth the serious investigation of farmers, before they commence the practice of feeding it extensively.

A YOUNG FARMER.

Breeding, Rearing and Fattening of Swine—No. 1.

COMPARATIVE VIEW OF DIFFERENT BREEDS.

Among the various articles of live stock, few are more profitable to the breeder than swine, while the number kept on a farm is proportioned to the quantity of offal on the premises; especially as the attendance they require is, when compared with that of others, very trifling, and the benefit arising from their dung more than counterbalances such attendance. The *characteristic marks* of a good hog are, a moderate length, as to the carcass in general; the head and cheeks being plump and full, and the neck thick and short; bone fine; quarters full; the carcass thick and full; his bristly hide fine and thin; the symmetry or proportion of the whole well adapted to the respective breeds or varieties; and above all, a kindly disposition to fatten early.

In consequence of the numerous sorts and varieties of these animals, found in almost every country, it is scarcely possible to ascertain which are the original breeds; under this head, therefore, but little more can be attempted than a brief notice of those most generally esteemed, and known under the following denominations:

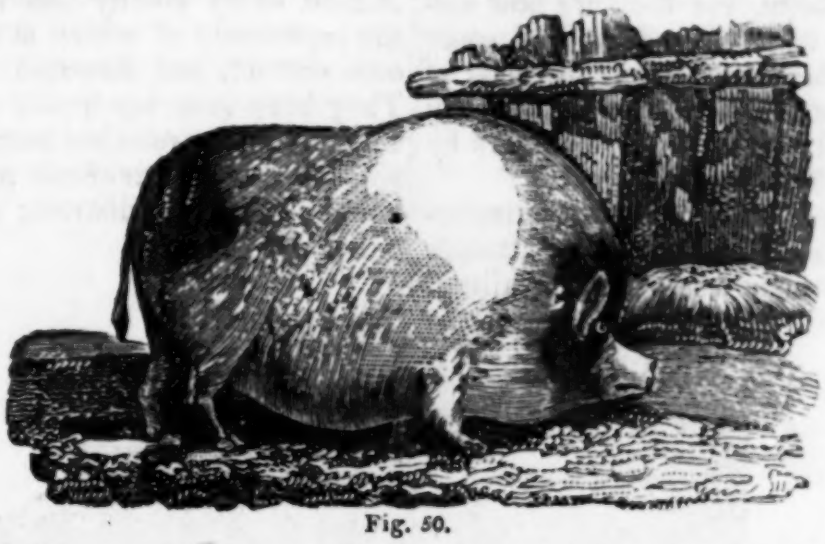

Fig. 50.

I. The CHINESE BREED, of the general appearance of which, the above is a tolerably correct delineation, when fat, were originally obtained, as their name imports, from China. Of these there are two nearly distinct kinds: the *white* and the *black:* both are small; and although of an extraordinary disposition to fatten, will seldom arrive to a greater weight than sixteen or eighteen stone, of fourteen pounds, at two years of age. The former are better shaped than the latter; but they are less hardy, and less prolific. They are both very small limbed; round in the carcass; thin skinned and fine bristled, and have the head so bedded in the neck, that when quite fat, the end only of the snout is perceptible. They are tender and difficult to rear, and the sows are bad nurses; yet, from their early aptitude to fatten, they are in great esteem with those who only rear young porkers. The flesh is rather too delicate for bacon; it is also deficient in lean; and their hind quarters being small, in proportion to the body, they cut up to disadvantage when intended for ham; they, however, possess the valuable properties of being very thrifty, and of fattening on a comparatively small quantity of food. There is also a *mixed breed* of this kind, being white variously patched with black; some of which have prick ears, like the true breed, which they otherwise resemble in form, and others have the ears round at the ends, and hanging downwards. These last are in every respect coarser than the former; but they are remarkably prolific; are good nurses, and, with proper care, will bring up two litters within the year. They are, however, only valuable as breeding sows and roasters; for they are very indifferent store pigs, rarely attaining any great weight, and infinitely more difficult to fatten than the original stock.

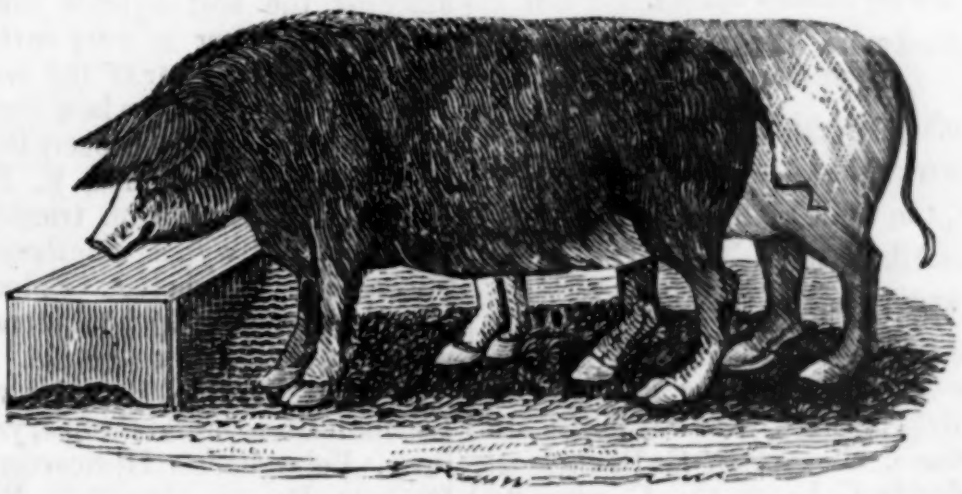

Fig. 51.

II. The animals from which the above figures were drawn, were bred by the late Sir William Curtis, and were exhibited at Lord Somerville's cattle show, in 1807, where they attracted universal admiration. They were of the BERKSHIRE BREED; the specific characters of which are a reddish color, with brown or black spots; sides very broad; body thick, close, and well formed; short legs; the head well placed, and the ears large, and generally standing forward; but sometimes pendant over the eyes. Another distinctive mark of this breed is, that the best are without bristles; their hair is long and curly, and from its rough appearance, seems to indicate coarse skin and flesh; but in fact, both are fine, and the bacon is of very superior quality. The hogs arrive at a very large size, and have been reared even to the weight of 113 stones of eight pounds.

Although generally termed the Berkshire breed, and having probably been originally

reared in that county, yet they are now dispersed over the whole kingdom; and some of the best are bred in the neighborhood of Tamworth, in Staffordshire, from the progeny of an animal well known to pig-breeders by the name of the *Tamworth Boar.*

The crosses from this breed are too numerous to be now distinguished, and my attempt to particularize them would be unavailing. Almost every county has its peculiar kind, the superiority of which is maintained in its own district, and disputed in every other. They have been repeatedly crossed with the Chinese; and a race has been obtained, which possesses some excellent properties, and is known in some districts as the *Tonkey breed.*

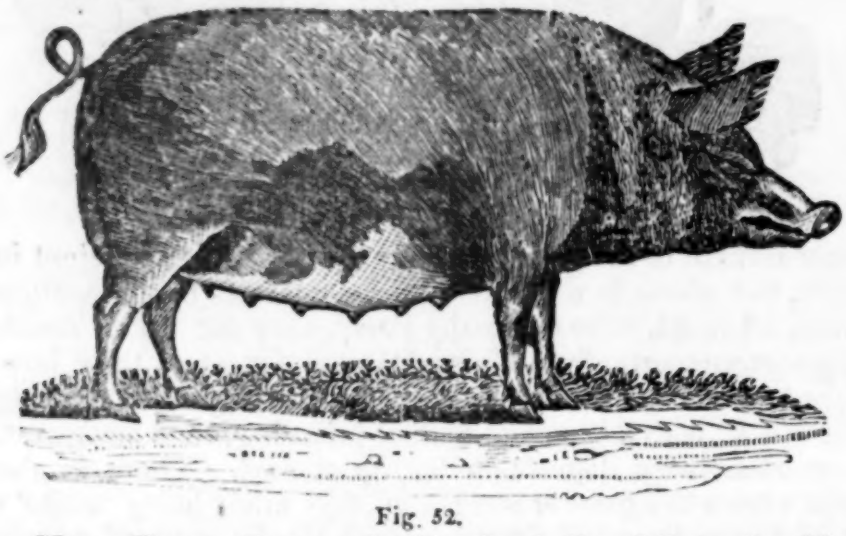

Fig. 52.

III. The Essex Half Black Pigs—of a sow of which kind, belonging to Mr. Western, of Felix Hall, the above is a portrait—are apparently descended from the Berkshire stock, and may be reckoned among the finest breeds in this country. They are black and white, short haired, fine skinned, smaller heads and ears than the Berkshire; but the latter are feathered with inside hair, which is a distinctive mark of both; short, snubby noses, very fine bone, broad and deep in the belly, full in the hind quarters, but light in the bone and offal; the sows are good breeders, and bring litters from eight to twelve; but they also have the characters of being bad nurses.

Mr. Western describes them, as feeding remarkably quick, growing fast, and being of an excellent quality of meat; and he considers them at least equal, upon a fair comparison of age, food and weight, to any sort whatever.

For the Farmers' Cabinet.

Pennsylvania Horticultural Society.

The monthly meeting of the "Pennsylvania Horticultural Society," was held on Tuesday, the 20th of March, in the Hall under the Athenæum. The President, Horace Binney, Esq., in the chair.

The Committee on Plants and Flowers awarded the premium for the best ten Camellias to Robert Buist, who exhibited Camellia Speciosa, C. eximea, C. Donkelaari, C. alba, C. florida, C. Landrethii, C. coronata, C. imbricata, C. concinea, C. Welbankia.

The premium for the best seedling Camellia, raised in Pennsylvania, was awarded to John Sherwood, Laurel Hill, who exhibited two very fine ones, especially one of them, the flower very compact and well formed, color dark red, a hybrid between the variegata and pompone, the flower has all the character of the imbricata, and opens in the same manner, remains a long time on the plant. Mr. S. may well be proud of it, being amongst the best hybrids that have been raised; the other is very dark red and has some of the character of the waratah.

The premium for the best display of plants in pots was awarded to Robert Buist, who exhibited Kennedya coccinea, K. florabunda, K. monophylla, Tropæolum tricolorum, T. brachyceras, Dillwynia cinerescens, Verbena Tweediana Euphorbia, Splendens, Ixora blanda, I coccinea, Erica tubiflora Polygala oppositfolia, Azalea coccinea, A. Gillinghamii, A. nova blanch, A. N. Phœncia, vari-Passiflora Loudonii Rosa fragrantissima, yellow noisette Rose, Pelargonium Hericartinum, E. Lord Denman, Epacris obtusifolia Burchellia speciosa, Mahernia odorata, Camellia conchiflora.

The premium for the best boquet was awarded to John Sherwood; William Chalmers, gardener to Mrs. Stolt, had a very fine one—came too late for competition.

McKenzie & Buchanan, Spruce and Schuylkill Fifth streets, exhibited some pots of Verbena Tweediana and Lantana Douglassii, raised from seed by Mr. Douglass, gardener, Washington city, a splendid new va-

riety with very large Lilac umbells, white in the centre of the corola, much larger than any other of the species known, and will soon be in the collection of every amateur.

John Sherwood, Laurel Hill, exhibited Erica imbricata, E. flora bunda, E. pubescens, and E. minor, Epacris pulchella, Hakea acicularis, Correa speciosa, Azalea Indica Alba, Arum crinitum, Ribus coccinea, Dilwynia cinerescens, Daphne, a new species, Lantana selowii, Kennedya rubicunda, Sprengelia incarnata, Erica margaratacea, Daphne Laureola, Cyclemen persicum, Camellia ileata, a new Helotrope, and the Double Crimson primrose.

Robert Kilvington exhibited Azalea Indica alba, Ixora coccinea Ornithogalum nivea, O. aureum, Pittasporum undulatum, Linaria cybelaria, Thunbergia alata, Rosa Smithii or yellow noisette, Cineraria cruenta, microstylis ophioglossoides, viola pecdata, Honstonea cœrula, Pelargoniums, stocks, cowslips, Auriculas metilla diphylla, Lind seuccio aurea.

The Committee on Vegetables awarded the premium to Daniel Reilly, gardener to Pierce Butler, Esq., for the best display of vegetables that evening. They likewise notice a basket of Snap Beans, exhibited by Robert Kilvington, as unusual for the season.

The exhibition of Tuesday evening reflects the highest credit on our practical gardeners and amateurs in and around the city. The fine healthy condition of the plants, as well as the interesting display of flowers, afforded a rich treat to the lovers of nature; and what, in our opinion, tended very materially to enhance the meeting, was the appearance of so many lovely smiling faces on the night in question. Philadelphia may now be said to vie, if not surpass any city in the Union, for taste in Horticulture. In support of this assertion, we may only remark that you cannot walk along any of our principal streets without seeing the windows filled with the choicest flowers tastefully arranged by the tiny hands of the fair occupants.

G. WATSON,
Recording Secretary.

Agricultural Society.

At a meeting of the Philadelphia Society for Promoting Agriculture, held at their Hall, on Wednesday, the 21st day of March, the following resolutions were unanimously adopted, and the same were ordered to be published.

Resolved, That a committe on premiums, shall be appointed each year, consisting of seven members, four of whom shall form a quorum.

Resolved, That the visits of the committee be confined to the state of Pennsylvania, and the distance twenty miles from the city of Philadelphia, except to competitors who are resident members of the society.

Resolved, That it shall be the duty of the committee, to meet on the 1st Wednesday of each month; articles offered in competition for premiums may be presented to the committee at such meetings as shall be designated. Such productions as cannot be presented at the committee room, will be visited by a sub or visiting committee; no member of a committee who may be a competitor shall be a judge or act on such articles as he competes for, but the committee may appoint a substitute in such cases.

PREMIUMS FOR 1838.

To the person raising the best crop of *Indian corn*, of not less than five acres, quality and quantity to be considered, competitors to notify the committee on or before the 1st Wednesday of September, a premium of $10

To the person raising the best crop of *Potatoes*, of not less than *one acre*, quality and quantity considered. - - $10

To the person raising the best crop of *Sugar Beets*, quality and quantity considered, not less than *half an acre.* - $10

For the best crop of *Mangle Wurtzel*, not less than *half an acre.* - - $10

For the best crop of *Ruta-baga*, not less than half an acre. - - - $10

For the *second best crop* of the foregoing, each a premium of - - - $5

Each successful competitor is expected to furnish the committee with a written account of the manner of cultivation, quantity and kind of manure, nature of soil, and as nearly as practicable, the amount of labor bestowed on his production.

To the person exhibiting the largest quantity of, and best *sugar beet seed*, of his own raising. - - - - $5

For the largest quantity of, and best *mangle wurtzle seed*, of his own raising. $5

For the best potatoes raised from seed, not less than one quarter of a peck. $5

For the best crop of *Spring Wheat*, not less than *one acre* quality and quantity per acre considered. - - - $10

For the *next best* crop of *Spring Wheat*, not less than one acre, quantity and quality per acre considered. - - - $5

Premiums may be withheld by the committee, when in their opinion the articles offered are not deserving of special notice.

Resolved, That the secretary be authorized to publish the above proceedings, and offers of premiums in the Farmers' Cabinet, and the other papers of the city and county.

Extracts from the minutes.

K. Smith, Secretary.

For the information of our patrons we give publicity, to the following notices.

EXTENSIVE SALE OF IMPORTED STOCK.

At the Old Norton Farm, East Bloomfield, five miles west of Canandaigua, Ontario Co., New York.

NUMEROUS applications having been made to purchase this stock, the proprietor has concluded, that in order to afford a fair opportunity to those who have already made enquiries, and others desirous of obtaining the breed to offer the same at **PUBLIC AUCTION,** *on Wednesday the 2d of May next*, on which day will be sold twenty *Improved Durham Short Horns*, Bulls, Cows and Heifers of various ages. Amongst the former is the famous Bull "ROVER," which was bred by the Earl of Carlisle, got by Rockingham, dam (Cherry) by Wonderful, gr. dam by Alfred, &c. &c. Rockingham was by Fairfax, dam (Maria) by Young Albion; gr. dam (Lady Sarah) by Pilot; gr. gr. dam by Agamemnon.—Also, *Alexander*, *Orion*, *Splendor*, and others. And of the Cows and Heifers, *Beauty*, *Primrose* own, sister to Reformer, *Prize*, *Lady Bowen*, *Brilliant*, *&c. &c.*

Three full blooded Mares and one 3 year old Studd colt, of pure racing breed, viz:—Brown Mare *Falconet*, by Falcon, dam by Catton, (Hindcliff's dam) Hannah by Sorceror Amelia, &c.

Bay mare Miss *Andrews*, sister to Caroline, by Catton, dam by Dick Andrews; her dam by Sir Peter; Play or Pay's dam by Herod, etc.

Chesnut Mare Jessica, by Velocipede, dam by Sancho; gr. dam Blacklock, and Theodore's dam.

Bay Stud Colt, Humphrey Clinker, by Allen's Humphrey Clinker, dam Miss Andrews, etc.

The well known stud horses Turk and Alfred, whose stock for the two seasons they have stood is unsurpassed.

Likewise about 20 Rams and a few ewes of the improved New Leicester breed of sheep. These are chiefly from a Ram belonging to the celebrated breeder Sir Tatton Sykes, for which he paid 300 guineas.

The whole of the above stock were selected from the highest order of blood in England by their present owner who imported it direct to this country, and can be recommended as worthy the notice and confidence of breeders.

Pedigrees may be had on, or previous to the day of sale, and further information obtained on application to THOMAS WEDDLE.

East Bloomfield, 1st Jan. 1838

N. B. The terms of payment will be liberal to those who wish.

The Imported Short Horn, DurhamBull,
MAXWELL.

Purchased of Mr. Whittaker, and owned by the importing association of New Castle county, will stand the ensuing season, at Woodside, the residence of Samuel Canby, Esq., near Wilmington, Delaware, and will serve cows at the following rates, viz. common cows at 5 dollars, half blood's dollars, and 10 dollars for full blooded animals,—in all cases the *cash* will be required at the time of service with the privelege of sending until in calf.

By order of the Association.

Good pasture furnished for cows if required.

To Correspondents.

Correspondents are most respectfully requested to forward their communications, so as to reach us, if possible, by the first of the month. The circulation of the Cabinet extends to all parts of the United States, and to some foreign countries; and as our list of patrons now amounts to nearly ten thousand, and is daily increasing, we are under the necessity of putting it to press early in the month. Our attentive friends, to whom we owe many thanks, will at once perceive the importance of an early transmission of their favors.

Seeds.

☞ Sugar Beet, Mangle Wurtzel, and Ruta Baga seed, of genuine quality, may be obtained at the Seed Store of GEO. M. COATES, No. 49 Market street, Philadelphia.

Quantity of Rain which has fallen in each month since January 1, 1838.

	inches
1st month,	2,20
2d month,	2,19
3d month,	3,17

Philada. Hospital, April 2, 1838.

Value of Time.

Sir Walter Scott, says—"Our time is like our money; when we change a guinea the shillings escape as things of small account; when we break a day, by idleness in the morning, the rest of the hours lose their importance in our eye."

Baden Corn.

The following statement in regard to this corn has been politely handed to us by Peter A. Brown, Esq., of this city, to whom it was addressed.

Philadelphia Feb. 3, 1838.

Dear Sir,—The few grains of Baden Corn which you gave me last spring I had planted in the back part of my garden; the stalks averaged about fourteen feet in height One stalk had four large ears and one small one on it; a number of the other stalks had four ears on each, and the rest had some three and some two ears on each,

Respectfully, B. NEWCOMB.

The Baden Corn answers very well in the Southern States—it is very productive we understand, but requires a long season. It is understood not to be well adapted to our climate.

THE FARMERS' CABINET,

A MONTHLY NEWSPAPER,

IS PUBLISHED BY

JOHN LIBBY, NO. 45 NORTH SIXTH STREET, PHILADELPHIA.

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Neall & Shann, Printers, North East Corner of Eighth and Market Streets.